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PROBLEMS OF GERMAN REPARATIONS

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Description: Analyses of the capacity of Germany to pay reparations, the nature of possible reparation goods, and the forms, methods, and administration of reparation payments.

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ERRATA

Page 10, Table 4

In column (6) for "Percent of column 1 to column 2", read "Percent of column 2 to column 1".

Page 21, Table 15, Footnotes

Fourth footnote (II, 2-13), for "at $300 per month in the armed forces", read "at $300 per man in the armed forces".

Last footnote (IV). This note refers to column IV, line 5 of the table; insert "5" following "IV" at beginning of note.

Page 34, Appendix A, Table 1

Production figures given for the last item in the table (Automobiles) are in number produced; insert footnote against these figures: "4. Number produced".

NOTE

Although this report considers various problems of reparations, the problem of securing reparations out of existing plant and equipment in Germany is not covered. This will be the subject of a forthcoming report of the Research and Analysis Branch.

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30 DECEMBER 1944

OFFICE OF STRATEGIC SERVICES
Research and Analysis Branch

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SUMMARY

1. Experience with reparations after the last war shows that claimant countries must be prepared to face certain consequences to their economies as a condition necessary to the payment of reparations, and that controls more effective than those established over Germany after the last war are required. Contrary to general belief, however, experience does not indicate that the payment of large sums by Germany is impossible.

2. Under favorable assumptions with regard to boundary changes, social disorganization, etc., Germany might be able to make an annual contribution of about RM26 billion at 1938 prices—roughly $6.5 billion. If consumption could be held at its wartime level and administrative controls maintained at their wartime peak of efficiency, this amount might conceivably be doubled. Such developments, however, are highly improbable.

3. Capacity to pay reparations depends partly on the type of product demanded by the receiving countries. Examination of data on German industrial capacity and pre-war exports suggests that coal, steel and its products, and textiles may be among the most important forms in which Germany can contribute to the rehabilitation of Europe. Germany could export substantial amounts of all of these commodities, although in each case problems might be created by the resulting competition with potential suppliers among the United Nations. The steel industry, in addition, is dependent on foreign sources for a large part of its raw material. (There may also be a raw-material problem in the case of textiles.) The value of imported raw materials, however, is small in relation to that of the finished products.

4. In addition to determining the amount of Germany's liability, the reparation settlement must also include provision for allocating payments among the various claimant countries. It will probably be necessary to devise a formula based primarily on the amount of damage suffered as a result of the war, modified in the light of the relative need of the various claimant countries, on the one hand, and (perhaps) their relative contribution to the winning of the war, on the other. Russia would be the principal claimant under such a formula. Modification to take account of need would give priority to Greece and Yugoslavia, while allowance for war contributions would increase the share of Britain and the United States.

5. The forms and methods of payment adopted depend chiefly on the purposes that reparations are intended to serve. If underlying policy is clarified, the transfer problem as such need not be serious.

6. Establishment of a reparations commission with power to determine the amount and allocation of the German reparation obligation would facilitate the handling of these problems. It will be desirable to allow the movement of goods from Germany on reparation account to begin before a final settlement has been reached. Under a reparations commission, which would be a responsible policy-making body, there might be established some sort of allocation administration to deal with the actual clearing and coordinating of orders for reparation goods. This organization would have to develop close working relationships with Military Government (or whatever civil authority may exist in Germany) as well as with UNRRA and other United Nations agencies.

PROBLEMS OF GERMAN REPARATIONS

I. INTRODUCTION

The purpose of this paper is to examine some of the major problems connected with the payment of reparations by Germany after the close of hostilities, and to present certain facts bearing on these problems.

The study is organized around seven crucial questions:

1. What applicable lessons can be learned from the attempt to collect reparations from Germany after the last war?
2. What is the maximum amount of reparations that might be expected from Germany under favorable conditions?
3. What commodities might be made available for transfer on reparations account?
4. What special problems will arise in the transfer of particular commodities?
5. How can the claims of various countries against Germany be evaluated and coordinated?
6. In what form can payment by Germany be arranged most satisfactorily; that is, how can the transfer problem be solved?
7. How can the production and collection of commodities for transfer as reparations be organized within Germany?

These questions are discussed in the seven following sections.

II. THE LESSONS OF THE LAST WAR

A. INTRODUCTION

The ineffective manner in which the reparation problem was dealt with in the period following the last war produced a series of "lessons." There were, and to some extent still are, as many "lessons" of reparation experience as there are schools of economic and political thought and personal, economic, and national interests. However, many of these lessons are merely opinions reached at one state of the development of the reparation problem after World War I, subsequently crystalized and artificially made general. The greatest weakness of these lessons is that they are not truly general. Any attempt to derive valid lessons from experience with the payment of reparations after the last war must rest on an analysis of the problem, based on a full understanding of the conditions under which each stage of the plan was expected to operate.

Possibly the outstanding lesson supposedly taught by past reparation experience and the one conclusion most widely accepted today is that substantial reparations cannot be transferred. Perhaps the most representative formulation of this belief is that it will be difficult if not impossible for the Germans to pay as much as $1 billion a year in reparations. In summary the argument for this belief rests on the fact that it was not possible for Germany to make payments of this size after the last war. Despite an inflow of foreign loans greater than the total of regular reparation payments, the Germans were unable to raise the latter above $1 billion. The fundamental explanation of this German inability to transfer wealth to the Allied countries is generally given in terms of the difficulties facing Germany in the export markets. The argument need not be prolonged since it is very familiar. But, despite its familiarity, it must be challenged. It rests on a series of assumptions as to the most desirable international and domestic economic arrangements and on a specific economic context.

On the other hand, the main and perhaps only important valid lesson of the attempt to exact reparations after the last war is that the transfer of wealth has economic consequences which affect all but the most primitively developed nations, and that these consequences must be faced, understood, and accepted in order to secure wealth in the form of reparation payments from Germany. It is one thing to point out that a given course of action involved particular reactions under certain historical circumstances and to make clear that these reactions reduced the value of the original action below expectations, but quite another to assume that the circumstances of one period will hold at a later period. Accurate generalizations can be made on historical

grounds only if full allowance is made for changed conditions.

An attempt is made in this section to summarize the special circumstances of the World War I reparation problem and to establish the principal respects in which the situation in the near future will be different.

B. THE ECONOMIC CONTEXT OF REPARATION PAYMENTS AFTER THE LAST WAR

The primary element of the economic climate after World War I was a firm belief, in the United States, Great Britain, and Europe generally, in the validity and virility of pre-war economic institutions. This strong belief was expressed clearly in the general identification of international governmental debts with private debts resulting from foreign investment. Years of successful management by bankers of large international investments, their servicing and repayments, had built a great faith in the institutions of London's City and New York's Wall Street. The rules of economic action were clear and had attained an authority equal to or greater than that of moral law. The "automatic" functioning of the gold standard had permitted large transfers of international exchange and had produced a political faith in the efficiency of the mechanisms of international financial transfer, without an understanding of their real limitations.

These firmly held beliefs, together with an armistice that precluded Allied administration of the German economy, constituted the framework in which reparation demands, payments, and plans were discussed and acted upon.

Early in the proceedings it became evident that financial thinking, rather than a goods-and-services concept of reparations, was dominant. Although reparations in the case of France were chiefly for damage done to property, the French Government made domestic funds available for the work of reconstruction and, at the behest of French contractors and labor, refused German offers to supply German labor for reconstruction projects. The French did not want German goods or services except for certain treaty-prescribed deliveries of coal, chemicals, and timber. The French Government's immediate objective, complicated by a number of other economic, political, and military considerations, was primarily related to the domestic fiscal situation. While some of the heat went out of the political and military objectives, such nations as France were bound to remain adamant when their political and military desires coincided with their financial necessities (if necessities are defined in terms of what is required to permit the continuation of popular fiscal policies).

France's fiscal situation provides the best illustration of the manner in which domestic economic policy militated in favor of high reparation demands and unwillingness to reduce the burden of payments on Germany, even though no German goods or services were required. While the British fiscal situation was serious enough to produce a similar attitude in 1919, British concern for the reestablishment of normal trade with Germany and for the competition of German reparation goods eventually changed the British position. The French were not particularly interested in export markets. Their position therefore rested squarely on their domestic financial situation.

This situation was, for the times, extremely serious. The French had large debts to Britain and the United States. They had a large internal debt, which they were increasing by their reconstruction efforts. Persons claiming war damages were reimbursed in bonds. A separate budget was created for reconstruction, and reparation payments were expected to meet these costs. No provision for these and some other war costs was made in the French domestic budget, and taxes were not increased. Similarly the franc was not allowed to depreciate, and in general no economic adjustments were made.

This domestic budgetary situation therefore provided a major reason for demanding large, immediate reparation payments in cash or its equivalent. The issue, as it presented itself to the French, was reparation payments from Germany or increased taxes in France, at a time when at least superficial signs of prosperity existed in Germany by reason of the growing inflation.

These motives found their expression in the plan to "commercialize" reparation payments. In the terminology that grew up around the reparation problem, "commercialization" came to mean the flotation of a foreign loan, privately placed, in order to pay off the principal of the reparation

debt to the creditor governments. In short, it meant substituting private foreign citizens for foreign governments as the principal creditors. The French had found it relatively easy to pay the indemnity demanded of them in 1871, partly because they found their credit abroad to be excellent. International finance had reached a peak in the period just before the World War, and large international loans and security sales had been successfully made. Therefore it was believed that the reparation debt could itself be floated on the world market, the largest part being taken up in the United States and Great Britain. Some of the statesmen concerned seem to have believed that the entire reparation debt could have been sold to private investors at one time, and almost all were certain that it could be sold in installments over a period of years. Thus the principal reparation-receiving nations expected to receive in a lump sum the reparations they were entitled to receive, while Germany would pay interest and eventually repay the principal of the debt to private investors over a longer period. A final reason for commercialization was probably not given a great deal of consideration in the early years after the war but became more important in the middle and late years of the 1920's. It was believed that the Germans would be more willing to make payments on a debt to private individuals than they would be to governments. Naturally this suggestion took full advantage of the fact that the Germans were believed to be more friendly to citizens of the United States and Great Britain than they were to France and Belgium. However, it overlooked the fact that, from the point of view of the German people, the share of their national income they would be paying would still not represent any value received, and any distinction between it and direct payment to the devastated countries would be extremely difficult to make.

The concentration of the claimants on foreign exchange, rather than on goods and services, obscured only for a time the twin problems of transfer and the effects on other trading nations (and to a lesser degree on any competitive producers) of Germany's efforts to increase her export surplus. To procure the foreign exchange demanded by the claimant countries, Germany necessarily had to achieve a large increase in her export trade. This necessity might be postponed so long as Germany could borrow abroad on a sufficiently large scale. But substantial foreign borrowing became possible only after the adoption of the Dawes Plan in 1924, and remained possible for only a few years thereafter. Hence the problem of securing foreign exchange through the sale of goods had, in fact, to be faced.

The transfer problem reached its most violent and absurd development in the first period of reparations when the German government was forced to resort to the sale of marks abroad on a market almost completely unfavorable on economic grounds and additionally prejudiced by some political efforts to depreciate the mark. However, it was realized after the German inflation had run its course that transfer could not be considered as an exclusively German problem, and the Dawes Report insisted that it be made the responsibility of the Agent General for Reparations acting for the receiving nations. The Germans were then required to make only limited payments in foreign exchange and had to make payments to the Agent General chiefly in domestic currency. At this point the transfer problem became simply a part of the over-all problem of the ability and willingness of the Allies to receive reparations by permitting the development of a German export surplus.

The problem of a German export surplus and its effects on world trade and on the interests of receiving nations and their former suppliers is the heart of the reparation problem and the basis for the formulation of generalizations as to the practical limit of annual reparation payments.

It is asserted that this limit is relatively low because of the unwillingness of nations eligible to receive reparations to accept the consequences to their economies of the receipt of goods and services. This unwillingness is the direct result of the economic systems and situations of the claimant countries.

France had a relatively well-balanced and self-sufficient economy after the last war. Large reparation imports were competitive with domestic industries and labor. France's need was for payment in money for the balancing of her domestic budget and the payment of her foreign debts. The British situation was to some extent similar, but was dominated by fear of the competi-

tion of German exports in world markets. The United States, which, by reason of the debts owed her, was in a position to be the ultimate receiver of a large part of reparation payments, had tariff barriers and a large excess of savings for investment abroad. Only undeveloped economies such as that of Yugoslavia found few limitations on their ability to absorb reparation payment without cost to domestic interests. In the major countries a short-term contribution from abroad could not justify, especially with economies pledged to *laissez-faire* principles, the readjustments necessary for an efficient absorption of the reparation payments.

In the reparation-receiving countries there did not exist economic control agencies capable of planning and carrying through any such adjustments. Furthermore, all government and private efforts were concentrated on restoring the economic conditions that had existed before the war.

In addition, the nature of the reparation relationships with Germany effectively limited the amount of payment. Full exploitation of Germany was not possible in any case. The armistice and the peace treaty were signed with a German Government that retained, except for periods such as the Ruhr Occupation, almost all the normal prerogatives of a government. The German Government was given a reparation obligation to meet. Although inadequacy of payments led to the Reparation Recovery Acts by which a 26-percent import duty on German goods entering Britain, France, and Belgium was collected in the currency of the receiving nations and credited to reparation account, in general responsibility for collecting and transfer was left to Germany. Especially after the Dawes Plan was accepted, the German responsility for collection was maintained, although special arrangements were made for the transfer of the bulk of payments by the Agent General acting for the receiving nations. The Agent General supervised the operation of the recommended taxes and special obligations on German industry and the German railroads, but the formation and operation of the German budget was a domestic problem despite the Agent General's frequent and critical comments. Obvious evidence of this is the fact that the Agent General's staff in the peak year of 1925–26 consisted of only 129 persons, including stenographers and clerical help.

The Germans were eventually able to borrow abroad an amount greater than the regular reparation payments and almost equal to the value of all the wealth transferred to the Allies, including the costs of occupation and the treaty obligations. They modernized their own industrial equipment and embarked on large-scale social-welfare efforts in housing, public health, recreation, etc. These loans would probably not have been available at least in such volume for reparation purposes. Nevertheless, it seems reasonable to suspect that more complete control of the German economy might have permitted the diversion of productive forces in Germany into fields that would have provided reparation goods even though they did make relatively unproductive use of German labor and facilities. The German and Allied economic predilections prevented such a program within Germany and limited the amount of reparation payments.

C. THE ECONOMIC CONTEXT OF THE PRESENT REPARATION PROBLEM

The principal differences between the economic circumstances after this war and those after World War I need be stated only briefly. Among them the most important are likely to be:

1. As a result of control by the United Nations of the German economy, necessary adjustments in the German economy can be made. The productive facilities and labor of Germany can be directed into those channels most fruitful for United Nations purposes without the difficulties that might result from the actions of a German Government. The techniques developed in wartime can be used to direct the flow of labor and materials into United Nations relief and reconstruction, much as they were used to curtail civilian production and produce armaments.

2. There will be a much greater tendency to face and evaluate the real rather than the monetary or short-term effects of reparations. The largest potential receiver of reparations is a socialist state, capable of planning its domestic production programs and its imports from non-German sources in such a way as to absorb reparation payments. A number of the other claimant countries are likely to be semi-socialist and almost all of

them are likely to have a degree of economic planning. Since central planning is necessary only to the degree required to prevent permanent injury to those interests affected, it is possible that the willingness to receive reparations will be greater and more widespread even in industrialized capitalistic countries than is often believed.

The domestic economic problems of claimant countries are likely to contribute to this willingness even though one of the principal problems, unemployment, will be the chief political and economic force operating to curtail willingness to receive. In many countries reconversion of a large proportion of the industrial plant will be necessary. Other portions of the industrial plant will have been damaged or destroyed, and little if any peacetime production will be taking place. Planning for these problems and for other government enterprises and public works can well include provision for the use of reparation goods. Since the range of government enterprises will be greatly expanded from the formerly accepted type of public works (roads, bridges, dams, etc.), there should be substantial opportunities for the use of German labor and products.

Finally, the knowledge that unwillingness to receive reparations in the past placed a limit on the amount secured from Germany will tend to make each country weigh carefully the consequences of receipt and put a premium on efforts to evaluate and compensate for competition with domestic industries. Strong as is the generalization that damage to one industry or group elicits powerful political counter-pressures while widespread benefits are received in silence, it is likely to be weaker in the post-war period than it has been in the past.

III. GERMAN CAPACITY TO PAY REPARATIONS, AS INDICATED BY ESTIMATES OF GROSS NATIONAL PRODUCT

A. THE PROBLEM

It is not possible at this time to make any definite assessment of the German capacity to pay reparations. Such an estimate must depend on factors that cannot be known, even approximately, until after the close of hostilities. Should military resistance within Germany continue at its recent intensity, and if the Germans demolish facilities in their own country with the thoroughness they have demonstrated in Italy and Russia, the possibility of receiving reparations from current production in Germany might be reduced to zero for some time to come.

German reparation capacity will also depend on the degree of political and social disorganization that prevails after occupation, on the administrative efficiency of Military Government or of whatever government is established in Germany, on the extent of boundary changes, on decisions regarding the demobilization of the armed forces and the disposition of prisoners of war, and on many other developments that cannot be anticipated.

The purpose of this section is simply to present certain relevant information on the German gross national product before and during the war, and to indicate some of the adjustments that must be made if this information is to be brought to bear on the problem of capacity to pay reparations.

National-product estimates, of course, can have reference only to that part of reparation payments which is derived from current production. The possibility of transferring existing capital equipment, securities, livestock, labor services, etc., is not considered here. Also the problem of converting an internal surplus into actual reparation payments (the transfer problem, in the broadest sense) is deferred for consideration in section VII.

B. THE SITUATION IN 1938

In 1938, the last year for which published figures are available, the German gross national product amounted to RM110 billion, allocated as follows:

Use:	*Amount in billions of reichsmarks, current prices*
Consumer outlay	58
Government expenditure:	
Civilian	16
Military	26
Private gross investment	10
Total	110

At least the amount of reported military expenditure in 1938 (RM26 billion) could probably be made available for reparations under relatively favorable conditions. Consumer outlay could be reduced below the 1938 level if the administrative

system functions with reasonable efficiency. Also private gross investment could probably be cut considerably unless the country is devasted before the close of hostilities. The necessity of providing for war veterans and their families, evacuees, and (probably) the unemployed will make it difficult to reduce the civilian component of government expenditure.[1] Boundary changes, of course, would require a downward revision.

If, with all these qualifications in mind, RM26 billion a year at 1938 prices is accepted as a minimum figure for theoretical German capacity to pay reparations from current production, it must still be pointed out that the ability to generate an export surplus of goods suitable for reparation purposes depends on the speed and effectiveness of the conversion of war industries to the production of other commodities. This in turn depends to some extent on the type of goods demanded by the reparation-receiving countries. The RM26 billion of 1938 war expenditure, that is, represents tanks, ammunition, uniforms, the pay of soldiers, etc., and some time must elapse before the resources used for these purposes can be diverted to production on reparation account.

C. THE SITUATION DURING THE WAR

The German gross national product in 1941 has been estimated by OSS at RM156 billion. It is believed that the figure for 1943 would not differ significantly from this. The allocation by uses is as follows:

Use:	*Amount* [1]
Consumer outlay	54
Government expenditure:	
Civilian	18
Military	82
Private gross investment	2
Total	156

[1] In billions of reichsmarks at current prices.

The estimated wartime military expenditure of RM82 billion a year cannot be considered as available for reparation purposes however, even under the most favorable conditions. Several important adjustments have to be made.

1. *Boundary changes.*—The figures presented above for 1938 refer to the *Altreich*, including the Saar. The 1941 estimates, however, cover Austria, the Sudetenland, Alsace-Lorraine, and other areas incorporated into the Reich since 1938. War expenditures attributable to these annexed territories amounted to perhaps RM8 billion. This must certainly be subtracted in estimating the reparation capacity of post-war Germany. Other proposed territorial changes would cause a further reduction of reparation potential. Loss of the area east of the Oder, for example, might cut reparation capacity by RM5 billion, without taking account of the transfer of population that would probably accompany the change and would (at least for some time) constitute an additional burden on the German economy.

2. *The Contribution of Occupied Countries.*—The estimate of German war expenditure in 1941 includes about RM5 billion representing the contribution of occupied countries to the Axis war effort.

3. *Price changes.*—In spite of rigorous price control, there seems to have been considerable inflation, particularly in the war sector of the German economy, since 1938. This is very difficult to estimate, but may account for roughly RM15 billion of the increase in war expenditure between 1938 and 1941.

4. *Labor supply.*—About RM5 billion of war production in 1941 was attributable to foreign workers employed in Germany. These workers will presumably return to their native countries after the close of hostilities. This loss would be more than offset by the demobilization of the German armed forces, who could probably add about RM15 billion to the national product after reemployment. It is possible, however, that large numbers will be held as prisoners of war or forced to work outside Germany in some other status, either not credited to reparations or not credited at the same rate as their potential product in Germany.

5. *Damage resulting from military operations.*—Even the most optimistic estimate of German capacity to produce after the close of hostilities must allow for some reduction as a result of aerial bombing and other military operations. An arbitrary minimum allowance of 10 percent is made here. This amounts to about RM5 billion a year.

[1] A large part of these expenditures (pensions and the like) would be merely transfer payments; that is, they would duplicate amounts already appearing as consumer expenditure. There may also, however, be an increase in administrative expenses connected with these payments, and probably an increase in direct services such as medical care and rehabilitation.

6. *Shifts in industrial distribution of employment.*—Conversion of the German economy to the production of goods on reparation account will probably entail some loss of average productivity, since the value of output per worker is relatively high in the munitions industries. There are fragmentary data indicating that this factor may have accounted for somewhat more than 5 percent of the increase in national product in the United States between 1941 and 1943.[2] Assuming that the German development between 1938 and 194 was comparable in this respect to that in the United States from 1941 to 1943, and that the pattern of reparation demand will be somewhat similar to that prevailing in Germany in 1938, this percentage can be applied to the estimate of German war expenditure (after the other adjustments outlined above). This rather arbitrary procedure results in a further reduction of about RM2 billion.

7. *Summary.*—These adjustments may be summarized as follows:

	Billion RM
Boundary changes since 1938	8
Contribution of occupied countries	5
Price changes	15
Contribution of foreign workers	5
Damage from military operations	5
Shifts in employment	2
Total reduction	40

If the trans-Oder territory is lost to Germany, a further reduction of perhaps RM5 billion will be necessary. On the other hand, if the German armed forces are speedily demobilized and reemployed, the reparation potential will be increased by about RM15 billion a year. Hence the *maximum* annual contribution indicated by the above analysis, under the most favorable assumptions, would be RM57 billion, derived as follows:

	Billion RM
War expenditure, 1941	82
Minus adjustments as above	40
Plus contribution of armed forces	15
Total	57

D. CONCLUSION

Under favorable assumptions with regard to boundary changes, social disorganization, and the other factors mentioned above under A, an annual contribution of at least RM26 billion at 1938 prices might be expected from Germany, assuming that the armed forces are speedily demobilized and reemployed. This would amount, very roughly, to $6.5 billion, at 1938 prices.[1] If consumption could be held at its wartime level, and if administrative controls could be maintained at their wartime peak of efficiency, the annual contribution might conceivably be doubled—increased, that is, to RM57 billion, as stated above. ($14 billion at 1938 prices.) Although conditions after the close of hostilities cannot be predicated with any assurance, it appears probable that the lower figure is considerably closer to reality than the higher. These estimates, in any case, represent economic capacity under certain conditions, and have no relation to an amount that the German people might be willing to undertake voluntarily as an obligation compatible with the maintenance of stable government.

IV. THE PHYSICAL COMPOSITION OF EXPORTABLE SURPLUSES

A. INTRODUCTION

In the previous section, an attempt was made to estimate the German internal capacity to produce goods and services on reparation account. This estimate was based on an analysis of gross-national-product statistics, and indicated the approximate value of possible reparation payments on the implied assumption that the receiving countries will be willing to take the commodities and services that Germany can most advantageously supply. It is now necessary to inquire what specific types of goods and services could be made available from German production after the close of hostilities.

It is obvious at the outset that the quantity of any one commodity that can be exported from Germany depends on the quantities of other commodities that are demanded. As shipments of steel or machinery increase, for example, those of coal must fall off, since coal must be used in Germany for the manufacture of the other products.

[1] The official exchange rate in 1938 was 40 cents = RM1, but most transactions were made through clearing accounts, in blocked reichsmarks, or through other special arrangements that had the effect of lowering the value of the reichsmark. For this reason, an exchange rate of 25 cents = RM1 has been used here.

[2] Gilbert, Milton and Jaszi, George. *National Income and National Product in 1943*, Survey of Current Business, April 1944, pp. 6-16.

B. COMPARISON OF VALUE ADDED BY MANUFACTURE, 1938 AND 1932

With this qualification in mind, a first approach to the problem of measuring maximum exports of various industrial commodities may be made by comparing value added by manufacture in 1938 and in 1932, for major industrial groups.

In making this comparison, it is assumed that the German economy was operating close to capacity in 1938. In view of the fact that the Nazi program of public works and preparation for war was well advanced by that time, this assumption is probably justified in a general way. There have been spectacular advances since 1938 in the output of certain commodities, particularly in such substitutes for imported raw materials as synthetic oil, synthetic rubber, rayon, and staple fiber. This fact must be borne in mind when the figures presented in table 1 below are interpreted, but it does not invalidate the conclusions to be drawn.

Just as production in 1938 may be taken to represent capacity, production in the depression year 1932 may be considered as the minimum necessary for the maintenance of the German civilian economy. This standard must be used with caution, however, particularly when considering individual industries. Consumption of many consumer-goods can be reduced below the 1932 level, as was done in Germany during the war years. On the other hand, the use of producer-goods in an economy operating at a high rate of production (in order to produce goods for reparation purposes) would be greater than was necessary during a depression.

The estimates presented in table 1 below are rather rough approximations. Figures for the gross value product of individual German industries and industrial groups were available for 1932 and 1936, but only a total figure for 1938. 1938 estimates for the categories shown in table 1 were obtained by extrapolating the 1932 data, using various indexes of industrial production published by the German Institute for Business Cycle Research. (Because of differences in classification, the 1936 figures could not be used as the basis of 1938 estimates for individual industries.) In order to translate gross value product into value added by manufacture, ratios prevailing in 1928–29 were applied both to the 1932 and the 1938 estimates. (Again it was impossible, for technical reasons, to use ratios from the 1936 census.) Since the ratio of value added to gross product increased substantially during the recovery years in Germany, this procedure tends to underestimate the apparent exportable surplus shown in table 1.

***Table 1.*—Value added by German industry, 1938, compared with apparent domestic consumption, 1932**

[In billions of 1928 reichsmarks]

Industry	A	B	C	D	E
	Value added		Exports minus imports, 1932 (in terms of value added)	Apparent consumption, 1932 (B–C)	Apparent exportable surplus (A–D)
	1938	1932			
Mining	4.8	2.4	----------	2.4	2.4
Stone and earth	2.4	.6	.2	.4	2.0
Iron and other metals	3.6	1.0	----------	1.0	2.6
Products of iron and other metals	1.7	.7	.5	.2	1.5
Machinery and vehicles	5.0	1.0	.5	.5	4.5
Electrical equipment	4.0	1.5	.2	1.3	2.7
Chemicals	1.8	.7	.3	.4	1.4
Textiles	3.0	2.0	.1	1.9	1.1
Paper	2.9	1.2	.3	.9	2.0
Leather	.8	.4	----------	.4	.4
Rubber goods, musical instruments, and toys	1.0	.5	.1	.4	.6
Woodworking	2.0	.5	----------	.5	1.5
Food industry	5.5	4.3	—.1	4.4	1.1
Clothing	2.2	1.4	.2	1.2	1.0
Building	4.5	1.5	----------	1.5	3.0
Total industry	45.2	19.7	2.3	17.4	27.8

Sources: Institut für Konjunkturforshung, Berlin, miscellaneous publications, particularly Wagemann, Ernst, ed., *Konjunkturstatistisches Handbuch 1936. Statistik des In—und Auslands*, vol. 14, no. 1 (1939–40); *Statistisches Jahrbuch für das Deutsche Reich*, 1934; Statistisches Reichsamt, *Monatliche Nachweise über den auswätigen Handel Deutschlands*, December 1938.

In order to eliminate the influence of price changes, the resulting estimates of value added by manufacture were expressed in 1928 prices, using wholesale price indexes published by the Institute for Business Cycle Research.

An attempt was also made to adjust the 1932 figures for imports and exports, in order to indicate the volume of production that was used within Germany to satisfy German needs. Data on the value of commodities imported and exported were available; they were reduced to a value-added

basis by applying the same ratios used in deriving the estimates of production, and were corrected for price changes by the same indexes of wholesale prices.

It should be noted that only exports and imports of finished industrial products were taken into account. Movements of raw materials and agricultural commodities are not reflected in the figures. Some indication of the dependence of German industry on foreign raw materials is given in table 2 below. (The values shown in this table are expressed in 1937 prices and are therefore not to be compared with those in table 1. The percentages, however, are relevant.)

***Table 2.*—Relative importance of domestic and foreign raw materials in German industry, 1937**

[In millions of reichsmarks]

	Domestic production	Imports	Exports	Apparent required consumption	Percentage of imports to consumption
I. Primary raw materials	4,235	1,881	543	5,573	34
1. Industrially produced [1]	3,360	714	530	3,544	20
2. Agricultural products [2]	875	1,167	13	2,029	57
II. Secondary raw materials [3]	1,810	901	564	2,147	42
III. Waste and used material [4]	550	195	14	731	27
All raw materials [5]	6,595	2,977	1,121	8,541	

[1] Coal, ore, minerals, etc.
[2] Flax, hemp, wool, hides, skins, etc.
[3] Minus value of primary raw materials contained in secondary raw materials: mineral oils, rayon, celluose, briquettes, coke, fertilizer, etc.
[4] Scrap metal, etc.

Source: *Die Bedeutung der heimischen Rohstoffproduktion für die Versorgung der deutschen Industriewirtschaft*, Institut für Konjunkturforschung, *Wochenbericht*, July 27, 1938, p. 217.

C. COMPARISON OF PHYSICAL VOLUME OF PRODUCTION FOR SELECTED COMMODITIES, 1938 AND 1932

Although a picture of the export capacity of German industry as a whole could be gained only by the complex and hazardous procedures outlined above, it is possible to present more straightforward information about particular commodities. This is done in table 3 below, which shows 1938 production and apparent 1932 consumption, in physical units, for a list of twenty-one industrial products. (Supporting data will be found in appendix A.)

D. PRE-WAR EXPORTS

German exports before the war provide little indication of the total amount of the export surplus that might be generated for reparation purposes. The pattern of exports by industries, however, gives an index to the most advantageous distribution of reparation orders, from the point of view of German capacity to produce.

German exports in 1929, expressed in constant prices, were more than twice as great as those in any year after the Nazi rise to power.[4] For the purpose of gaging the possible post-war pattern, however, a more recent year is preferable. Because the Census of Manufactures gives detailed information for 1936, that year has been chosen.

***Table 3.*—Approximate productive capacity and domestic requirements, by volume, of specified commodities, Germany (pre-war territory)**

[In thousands of metric tons]

Commodity	Approximate productive capacity (1937 or 1938 production)	Approximate domestic requirements 1932 production plus imports minus exports)	Apparent surplus
Coal	186,179	90,252	95,927
Lignite	194,980	115,391	79,589
Pig iron	18,044	3,734	14,310
Steel ingots	22,661	5,563	17,098
Rolling-mill products	14,118	3,305	10,813
Aluminum	161	18	143
Coke (in coke works)	40,921	14,876	26,045
Coal briquettes	6,786	2,467	4,319
Potash	14,460	6,105	8,355
Cement	12,605	2,943	9,662
Thomas slag	2,312	533	1,779
Calcium cyanamide	603	344	259
Electric power [1]	48,969	23,459	25,510
Rayon [2]	65	[2] 31	34
Staple fiber [2]	155	[2] 1	154
Chemical wood pulp	1,430	785	645
Mechanical wood pulp	1,134	675	459
Paper and cardboard	3,569	2,022	1,547
Machinery	3,358	616	2,742
Leather shoes [3]	73,898	50,000	23,898
Automobiles [4]	276,592	50,000	226,592

[1] Million kilowatt-hours.
[2] Capacity of this industry has been greatly expanded in recent years. See sec. V, D, below.
[3] 1,000 pair.
[4] Number of automobiles.

Sources: See appendix A.

[4] US Department of Commerce, *Foreign Commerce Yearbook*, 1939, p. 51. German exports, excluding transit trade, expressed in billions of gold dollars, were as follows: 1928, 2.9; 1929, 3.2; 1930, 2.9; 1931, 2.3; 1932, 1.4; 1933, 1.2; 1934, 1.0; 1935, 1.0; 1936, 1.1; 1937, 1.4; and 1938, 1.2.

In appendix B, exports are compared with total sales, by industrial categories. A further calculation of the origin of export values has been made, for a broader grouping of industries, by comparing the total value added by each industry with the contribution of that industry to the value of the exports attributed to it. These results are presented in table 4 below.

E. REGIONAL ORIGIN OF EXPORT SURPLUSES

A rough notion of the probable regional origin of commodities available for transfer on reparation account may be gained from table 5, below, which shows the value of exports by states and provinces in 1936. (A regional breakdown of 1928 exports for several important commodities, accounting together for about 25 percent of total exports in that year, is given in appendix C.)

Table 4.—Origin of export values, by industries, Germany, 1936

Industry groups	Total value added by industry	Exports				
		Value added by industry	Contribution of other industries	Total	Percent of all exports	Percent of column 1 to column 2
	Millions of reichsmarks					
	(1)	(2)	(3)	(4)	(5)	(6)
Mining	2,234.8	279.9	175.2	455.1	9.8	12.5
Power-producing commodities	245.0	11.4	23.6	35.0	.8	4.7
Iron-producing industry	1,173.6	124.8	127.3	252.1	5.5	10.6
Non-ferrous-metals industry	536.3	42.6	94.0	136.6	3.0	7.9
Foundries	710.6	26.3	14.7	41.0	.9	3.7
Iron and steel goods	1,790.3	229.6	160.8	390.4	8.4	12.8
Machine industry	2,615.3	442.6	234.2	676.8	14.6	16.9
Iron and steel construction	558.2	54.1	47.3	101.4	2.2	9.7
Vehicle industry	836.4	52.5	62.4	114.9	2.5	6.3
Electrical industry	1,502.6	187.4	81.5	268.9	5.8	12.5
Mechanical and optical industry	367.8	103.4	34.5	137.9	3.0	28.1
Metal-goods and related industries	771.1	136.7	91.2	227.9	4.9	17.8
Stone and earth	1,231.1	32.5	11.9	44.4	1.0	2.6
Ceramic industry	255.3	41.8	13.9	55.7	1.2	16.4
Glass industry	237.5	44.4	18.2	62.6	1.4	18.7
Sawmill industry	316.3	1.4	2.0	3.4	.1	.4
Woodworking industry	720.8	33.2	25.7	58.9	1.3	4.6
Chemical industry	1,533.9	308.0	232.4	540.4	11.7	20.1
Chemo-technical industry	742.1	46.5	37.5	84.0	1.8	6.3
Rubber and asbestos industry	270.4	22.3	17.3	39.6	.8	8.2
Paperboard, cellulose and lignin industry	461.5	42.8	64.5	107.3	2.3	9.3
Printing and paper processing	1,001.5	36.7	26.4	63.1	1.4	3.1
Leather industry	647.4	36.2	49.5	85.7	1.9	5.6
Textile industry	2,839.7	195.7	257.4	453.1	9.8	6.9
Clothing industry	754.0	29.2	32.2	61.4	1.3	3.9
Oils and fats, feedstuffs and animal glues industries	402.8	4.8	11.2	16.0	.3	1.2
Spirits	228.6	.2	.5	.7	0	.1
Food-processing industry	2,961.5	24.9	35.6	60.5	1.3	.8
Public utilities	1,972.1	3.5	.6	4.1	.1	.2
Building industry and miscellaneous industries	4,267.0	23.9	16.1	40.0	.9	.6
All industries	34,185.5	2,619.3	1,999.6	4,618.9	100.0	7.7

Source: *Die Deutsche Industrie, Gesamtergebnisse der amtlichen Produktionsstatistik*, Schriftenreihe des Reichsamts für Wehrwirtschaftliche Planung, no. 1 Berlin: verlag für Sozialpolitik, Wirtschaft und Statistik, 1939).

Table 5.—Industrial exports, by states and provinces, Germany, 1936

State or province	Value of exports	
	Millions of reischsmarks	Percent
Rheinprovinz	967.4	20.9
State Sachsen	522.4	11.3
Westfalen	520.4	11.2
Berlin	313.0	6.8
Hessen-Nassau	233.6	5.0
Württemberg and Hohenzollern	225.6	4.9
Province Sachsen	222.9	4.8
Baden	191.1	4.1
Nordbayern	185.1	4.0
Hannover	168.5	3.6
Thüringen	166.4	3.6
Hessen	128.0	2.8
Pfalz	117.5	2.5
Hamburg	90.2	2.0
Südbayern	87.5	1.9
Brandenburg and Grenzmark Posen-Westpreussen	83.2	1.8
Saarland	77.4	1.7
Niederschlesien	62.7	1.4
Schleswig-Holstein	58.2	1.3
Oberschlesien	48.6	1.1
Ostpreussen	16.9	.4
Oldenburg	13.9	.3
Pommern	13.6	.3
Mecklenburg	5.4	.1
Other States	99.4	2.2
Germany	4,618.9	100.0

Source: *Die Deutsche Industrie. Gesamtergebnisse der amtlichen Produktionssatatistik*, Schriftenreihe des Reichsamts für Wehrwirtschaftliche Planung, no. 1 (Berlin: Verlag für Sozialpolitik, Wirtschaft und Statstik, 1939).

V. SPECIAL PROBLEMS IN THE TRANSFER OF PARTICULAR COMMODITIES

A. INTRODUCTION

In the previous section German productive capacity and pre-war foreign trade were analyzed in order to indicate in a general way the commodities that might be most advantageously made available for transfer as reparations. In the light of this information and of the probable needs of the receiving countries, certain of these commodities have been selected for more detailed discussion in this section. Coal, steel, and its products, and textiles will probably play an important part in the reparation settlement, and each of them is likely to raise special problems.

B. COAL

1. *The early post-hostilities period.*—There can be little question that shipments of coal from Germany as reparation payment will be acceptable to many of the countries involved in the reparation settlement. This will certainly be true of those countries which must normally import coal to satisfy domestic requirements.

The level of reparation demand which will develop during the early period is difficult to forecast; with the exception of the U. S. S. R. the most relevant data would appear to be those referring to the pre-war coal position of the various claimant countries. These are shown in table 6 below. The way in which these figures should be combined to estimate post-hostilities demands on Germany depends, of course, on the level of industrial activity in the countries concerned, and the speed with which coal mining in producing countries can be resumed. It should be noted that curtailed operations at coal mines do not necessarily mean that reparation demands to the amount of full peak-year consumption will develop, for industrial installations also will be affected and industrial activity will probably be at a generally low level for some time. As far as Russia is concerned, there is reason to believe that extensive new coal deposits have been under development and that reparation demands for coal, therefore, are not likely to be important.

Table 6.—Consumption, exports, and imports of coal in selected countries in peak pre-war years [1]

[In millions of metric tons]

Country	Year	Consumption	Net imports	Net exports
Belgium-Luxembourg	1929	37.5	10.6	.....
Denmark	1937	6.6	6.6	.....
France	1929	89.0	33.4	.....
Netherlands	1937	12.8	.....	1.6
Norway	1937	3.7	3.7	.....
Poland	1929	32.5	.....	13.7
United Kingdom	1929	201.7	.....	60.3
Czechoslovakia	1929	29.5	.....	2.3
Yugoslavia	1929	2.3	.7	.....
Greece	1937	1.0	.993	.....

[1] In this table and in the textual discussion the data relate to *Steinkohle* equivalents of various coals and coal products. This is normally done in order to get *Steinkohle*, brown coal, coke, and briquettes on a common basis. The conversion ratios to *Steinkohle* are: for brown coal 9 to 2 in Germany, Denmark, and France and 3 to 2 in Czechoslovakia; for coke 3 to 4; and for briquettes 10 to 9.

In peacetime the German export surplus of coal is large enough to meet a good part of the import requirements of other European countries. In 1937, a peak year, the net export of coal and coal

products from Germany was 43.3 million tons in terms of *Steinkohle* equivalents. Since that time—owing to the growth in output of brown coal—total German coal output in *Steinkohle* equivalents has expanded. Whether as much coal as in 1937 or more will be available for reparation shipments depends upon several factors. It depends, first, upon the level of activity maintained in the German coal industry in the post-hostilities period. No doubt particular efforts will have to be made to maintain production in the face of the economic disorganization which is likely to prevail at that time. It depends, too, upon the extent to which the coal needs of the non-reparation-receiving countries, including neutrals and former allies of Germany, are to be satisfied. In 1937, close to 15 million tons of Germany's exports went to such countries—principally Italy, Switzerland, Sweden, Spain, and Austria. It depends, finally, upon the degree to which the wartime pattern of consumption can be altered and this, in turn, depends in part on the demands for other types of reparation goods which are placed on Germany.

Wartime Germany appears to produce about 10 million tons of coal above the amounts consumed in industrial and domestic uses. At least this amount of coal should, therefore, be available for export if the wartime level of coal production is maintained. An increase in this amount would require a cut in the wartime rate of consumption of coal for industrial and domestic use in Germany.

Table 7 below shows German coal consumption during the coal years 1934–44 according to broad use-categories. The category which would be least affected by the imposition of heavy reparations in industrial goods is that called "Retail Market." Substantial reductions in the amounts of coal going into the end-uses included under this heading may be possible even if a high level of industrial activity is maintained in Germany. It is significant, in this connection, that, according to one estimate of minimum German requirements in this category during the period of military occupation, 30 million tons could be cut from the 1934–44 allotment and released for other uses.[5]

In the case of the other use-categories, the situation is less clear, but presumably the amount of coal consumed for these uses during occupation would bear approximately the same ratio to wartime consumption as the general level of industrial activity bears to the wartime level. In addition, however, certain types of industrial activity consume much larger amounts of coal than others, so that any special considerations affecting such industries may have considerable influence on the size of the German coal export surplus. If, for example, there is little or no production of synthetic petroleum in post-hostilities Germany—and a reduction in output is likely if only because of the destruction of plants through bombing operations—up to 23 million tons of coal would be released for other uses.[6]

***Table 7.*—Coal consumption in Germany 1934–44 [1] [2]**

[In thousands of metric tons]

Use:	*Amount*
Consumed at mines	21, 900
Distributed to mine workers	2, 500
Transportation	24, 800
Electric power (and gasworks)	29, 800
Industry	95, 300
Retail market [3]	52, 000
Stocks at mines	3, 700
Total	230, 000

[1] Statistics are for the so-called *Kohlenwirtschafts jahr* beginning April 1 and ending March 31.

[2] All figures have been converted into *Steinkohle* equivalents.

[3] Includes households, apartment houses, hotels, stores, public buildings, institutions, and small handicraft establishments. Fuel used for agricultural purposes, especially for steam-driven machinery is also included.

Source: *German Coal-Mining Statistics for the War Period*, translated from *Reichsvereinigung Kohle, Statistischer Bericht*, Nr. 11, Berlin, May 1944, by the Economic Warfare Division, American Embassy, London.

***Table 8.*—Coal production in Germany by districts**

[In thousands of metric tons]

I. STEINKOHLE

Area	1938	1943–44 [1]
Ruhr	127, 284	124, 400
Aachen	7, 754	7, 400
Saar	14, 389	16, 200
Upper Silesia	25, 983	27, 000
Lower Silesia	5, 307	5, 100
Others	5, 469	7, 600
Total	186, 186	187, 700

[5] In the Civil Affairs Guide, *Coal Production and Distribution in Germany*, the proposed allocation to this use-category during occupation is 22 million tons of *Steinkohle* equivalents.

[6] Cf. Civil Affairs Guide, *Coal Production and Distribution in Germany*, table 4.

Table 8.—Coal production in Germany by districts—Con.

[In thousands of metric tons]

II. BROWN COAL

Area	1938		1943-44[1]	
	Actual weight	Steinkohle equivalents	Actual weight	Steinkohle equivalents
East of the Elbe	49,871	11,080	68,400	15,000
Central Germany	83,777	18,620	114,600	25,000
Cologne District	58,433	12,980	68,100	15,000
Bavaria:				
Brown coal	1,356	300	(2)	
Pitch coal	1,525	340	(2)	
Total	194,962	43,320	251,100	55,000

[1] See footnote 1, table 7.
[2] Data not available. Output known to be small.

Source: Same as table 7.

No account has been taken in the foregoing discussion of the possibility of German territorial losses. The production of coal is concentrated in those parts of Germany which are most likely to be involved in any territorial reshuffling that may be contemplated. It is not possible to anticipate these changes but their effect, based on various assumed readjustments, may be determined from the data in table 8 above. The importance of such changes may be obviated to some extent by the concentration of reparation shipments in the period before changes became effective.

2. *The longer run.*—Among the countries which receive German coal as reparations in the early post-hostilities period there will be some which will want to continue the arrangement as long as possible. This sort of attitude is likely to be held by the chief coal-deficit countries (cf. table 6). Just as the Versailles Treaty provided that France, Belgium, and Italy should receive large amounts of German coal on reparation account for a period of 10 years, so provisions of the same kind may be urged by the claimant countries which must normally import coal. It is to be expected, too, that arrangements of this type would be resisted by the large coal-exporting countries among the Allied nations. Normally coal exports from Germany have been competitive with exports from Great Britain and Poland (the two other large coal-export countries), and producers in these countries would undoubtedly be opposed to granting an advantage in the competitive struggle to German producers by assuring them a large portion of the European export market.

The percentage share of each of these countries in European coal exports in the pre-war period is shown in table 9 below; the marked decline in the British share is evident, as is the increase in the German share at the expense of both Britain and Poland. The importance to the British and Polish export market of reparation-receiving countries may be seen from tables 10 and 11 which are presented immediately after table 9.

Table 9.—European coal exports by country of origin, 1932–37

Country	Percent of total coal exports			
	1932	1935	1936	1937
United Kingdom	58.3	54.1	50.5	47.3
Germany	20.0	27.8	30.7	34.5
Poland	11.0	9.2	9.0	9.8
Holland	5.3	3.3	3.7	3.9
Belgium	3.8	4.5	5.0	3.9
France	1.6	1.1	1.1	.6
	100.0	100.0	100.0	100.0

Source: British Basic Handbook, *Coal.*

Table 10.—Exports of coal from Great Britain to certain European countries[1]

[In thousands of metric tons]

Country	1924	1929	1933	1934	1935	1936	1937[2]
Germany	6,824	5,521	2,360	2,541	2,885	3,046	3,286
Belgium	3,330	4,140	1,431	972	631	524	925
France	14,535	13,045	8,696	7,669	7,130	7,146	8,866
Sweden	3,550	2,336	1,984	2,610	2,527	2,693	3,307
Norway	1,822	1,444	983	1,371	1,311	1,327	1,599
Denmark	3,551	2,194	2,857	3,088	3,175	3,330	3,303
Total to European markets	54,736	51,378	32,870	33,718	32,761	28,998	34,720
Total Exports from Great Britain	61,651	60,267	39,068	39,660	38,714	34,519	40,380

[1] Excludes coal products.
[2] Provisional.

Source: Jones, J. H., Cartwright, G., and Guenault, P. H., *The Coal Mining Industry*, London. 1939.

Table 11.—Export of coal from Poland [1]

[In thousands of metric tons]

Country	1929	1935	1936	1937
Austria	3,247	956	788	784
Czechoslovakia	924	212	30	48
France	682	1,080	1,221	1,568
Belgium	0	335	481	634
Holland	0	117	201	327
Italy	574	1,420	931	1,690
Denmark	1,871	481	300	304
Sweden	2,673	2,353	2,329	2,576
Norway	604	453	395	387
All other including bunker coal	3,337	1,499	1,686	2,685
Total	13,912	8,906	8,362	11,003

[1] Excludes coal products.

Sources: Same as table 10.

C. STEEL AND ITS PRODUCTS

There are two ways in which German steel may enter into reparation shipments: (1) as primary steel—the product of the steel furnace and the rolling mill; and (2) as manufactured products in which steel figures as an important material. German ability to make both types of shipments depends on the surplus of steel that will be available over domestic needs in the post-hostilities period. This aspect will be discussed first, followed by a consideration of the nature of the demand for reparations in steel and steel products which is likely to develop.

1. *The German steel export surplus.*—Estimated German steel capacity at the close of the war according to regions is shown in table 12.

Table 12.—Germany: Steel capacity by regions at the close of hostilities

[In thousands of metric tons]

Rhineland-Westphalia	16,000
Siegerland-Hesse	475
Saar	2,750
Silesia	600
Saxony	700
South Germany	550
Northeast and Central Germany [1]	4,000
Total	25,075

[1] Includes 2 million tons at Hermann Goering Werke, Salzgitter. There is a likelihood that plans to develop this capacity have not been realized. If so, the total should be reduced by this amount.

Probably from 20 to 23 million tons of steel is a reasonable volume of output to anticipate on the basis of available capacity. These figures refer to Germany with pre-1938 borders; the effect on production of territorial changes may be worked out from the data shown in table 12. The discussion in the remainder of this section is in terms of a Germany which is territorially intact.[7]

The minimum essential steel needs of the German domestic economy consist of two broad categories of use: (1) steel going into products for direct civilian use; and (2) steel required for operating supplies and for replacement, maintenance, and repair of equipment and facilities in those industries which remain in operation. War experience has shown that the essential needs in the first category take quite small amounts of steel. The amounts of steel needed for the second category of use are rather more substantial and their magnitude depends in large part on the level at which the economy is operated.

Using the estimated German wartime pattern of steel consumption as a guide, it would appear that in the post-hostilities period Germany can exist on from 6 to 8 million ingot tons of steel.[8] In addition to essential civilian needs, this includes the quantities of steel which will be required for replacement, maintenance, repair, and operation in those industries which must continue in order to meet domestic needs and to produce large amounts of goods on reparation account. In all cases these requirements have been estimated at wartime rates—which presumably could not be continued without modication for any extended period into the future—and are based on the assumption that positive measures will be taken to prevent steel from flowing into unessential uses. Germany will be left, therefore, with a surplus of from 12 to 17 million ingot tons of steel for direct export or for embodiment into steel products for export.

If the capacity of the German plant to produce steel is to be fully exploited, large amounts of raw material will be required. The chief raw materi-

[7] It is not possible to measure the effect of territorial change on reparation shipments without knowledge of the date at which such changes became effective. If the bulk of shipments antedates the effective date of change, the problem is in good part obviated. If not, and unless special provision is made to avoid such results, territories separated from Germany may be able to avoid the reparation burden which otherwise they would have to bear. This matter is of particular importance in steel because of the concentration of steel production in disputed areas.

[8] This figure was built up from estimates for each major steel-using industry. The figures for individual industries are not presented, however, because of the wide margin of error to which they are individually subject.

als are iron ore and coal. The coal requirements of the German industry are met from domestic sources and therefore cause no problem in normal times. It is likely, however, that coal will be in short supply throughout Europe in the early post-hostilities period and, since the metallurgical industries use such large amounts, their needs can probably be satisfied only by denying coal to other uses. (Cf. Table 7 on coal utilization in the preceding section.)

Unlike coal, iron ore must normally be imported to support a high level of steel activity. The German iron-ore position in the pre-war period, as shown in table 13 below, involved a very heavy reliance on outside sources. In 1937 and 1938 domestic ore production accounted for about one-third of the total in terms of ore and only about one-fourth of the total in terms of iron content.

***Table 13.*—Production and net imports of iron ore, Germany, 1935–38**

[In thousands of metric tons]

	1935	1936	1937	1938
Production	6,044	7,570	9,792	11,145
Net imports	14,609	18,463	20,611	21,923
Available for consumption	20,653	26,033	30,403	33,068

The data in table 13 represent Germany's ore requirements only and are in addition to the large quantities of scrap used in steel production. The availability of scrap at the close of hostilities may result in a greater than normal utilization of scrap in steel production. Using pre-war practice as a guide, it would appear that between 15 and 20 million tons of ore will have to be imported in order to produce steel in the neighborhood of 20 million tons.

Normally France and Sweden supply the bulk of Germany's iron-ore imports. Both these countries will probably be in a position to export ore to Germany in the post-hostilities period. The problem which will arise is one of payment. If the problem of payment threatens to limit imports, it will be possible to fall back on two alternative sources of iron—scrap and domestic iron ore. The ratio of iron ore to scrap iron in steel production is a flexible one and with some effort a use of scrap somewhat greater than normal can probably be achieved. Domestic iron ore probably can also be used more widely than has been the case in the past. The overriding consideration in this connection is likely to be that such ores are less economic in coke consumption than higher-grade imports and therefore undesirable to use in a situation where coal and coke supplies are short, as they promise to be in the post-hostilities period.

Certain other raw materials probably will have to be imported if German steel production is to continue at a high level into the post-war period. It is likely that German stocks of most alloys will have run out at the war's end. With the exception of manganese these will be needed in quite small amounts and therefore will cause no large problem. Manganese requirements will run in the neighborhood of several hundred thousand tons of ore. This should be procurable from the U. S. S. R. if operations at Nikopol are resumed at half of pre-war capacity or above.

2. *The nature of reparation demands.*—The demand for reparations in steel and products made from steel will be influenced chiefly by the capacity of the several claimant countries to absorb such products. Two factors are influential in the determination of a country's capacity to absorb unfabricated steel products (i. e., the product of steel rolling mills); these are (1) the size of the domestic industry and its ability to satisfy domestic requirements; and (2) the availability of processing facilities to convert the unfabricated steel (with the exception of such products as rails and structural material which are used directly) into usable products. The first factor is particularly important in an ordinary profit economy where serious readjustments would be required were the home market to be denied to domestic producers through the inflow of reparation shipments from abroad. The second factor affects all countries: it would be foolish in any type of economy to demand goods which could not be used in the form received and which could not be processed to a form usable inside the country. In determining a country's capacity to absorb fabricated steel products only the first of the factors mentioned above is important.

The practical importance of these distinctions is that in the case of unfabricated steel the absorptive capacity of the U. S. S. R. is limited along

with that of all other countries: in the case of fabricated steel products there is no practical limit to Russia's absorptive capacity. This implies that, even should the demand for primary steel fail to tax German steel capacity, the combined demand for primary steel and products manufactured from steel is sure to do so. This analysis is developed in greater detail below.[9]

a. *Primary steel.*—Steel production, imports, and exports of the leading reparation claimants (excluding U. S. S. R.) are shown in table 14, for the most part for peak pre-war years. It is clear from this tabulation that large reparation demands for primary steel are not likely to develop. It is quite unlikely that the United Kingdom, Belgium, Luxembourg, and France will demand German primary steel. Their interests are more likely to be in utilizing the production of domestic industries even if in the early period reconstruction needs should seem to outrun the industry's capacity at the time. Under the same circumstances Poland and Czechoslovakia may want some steel, but they are unlikely to develop large demands. Yugoslavia, the Netherlands, Norway, and Greece, normally importers of primary steel, are almost certain to want reparations in steel but, to judge from the table, their absorptive capacity is not large.

It is also unlikely that the U. S. S. R. will demand primary steel in excess of the absorptive capacity of the fabricating industries in the country. There is some reason to believe that there may be a rough balance between primary steel production and fabricating facilities in that country. In this case the U. S. S. R. demand for primary steel will probably consist principally of requests for structural materials, which is just the class of primary steel wanted by other countries.

[9] It should be noted that the discussion is oriented towards conditions in the early post-hostilities period. The longer-run position is dominated by the Russian capacity to continue to take manufactured products from Germany long into the foreseeable future. The countries which are likely to want to continue to receive shipments of primary steel may be judged from Table 14.

Table 14.—**Production, imports, and exports of primary steel in peak pre-war years for selected European countries**

[In thousands of metric tons]

Country	Year	Production of ingots and castings	Primary steel products		
			Production	Imports	Exports
United Kingdom [1]	1937	13,192	9,797	1,338	2,481
France [2]	1929	9,700	6,809	201	2,488
Belgium-Luxembourg [3]	1929	6,812	6,080	318	4,469
Czechoslovakia [4]	1937	2,318	1,630	26	466
Poland [5]	1938	1,549	1,076	47	293
Yugoslavia [6]	1938	220	-------	75	-------
The Netherlands [7]	1937	-------	-------	1,084	76
Norway [7]	1937	-------	-------	362	-------
Greece [8]	1937	-------	-------	130	-------

[1] Production is known to have increased since 1937. However, these figures are considered adequate for the purposes. About 40 percent of the imports consisted of semi-finished steel products which were processed further—and possibly exported—by the British. Normally Belgium and Luxembourg are the chief source of such exports.

[2] Excluding the Saar.

[3] Joint reporting of exports and imports prevents separate treatment for each.

[4] Actually peak output of primary steel products was in 1929, even though peak crude-steel production was in 1937. The difference between the 2 years is slight.

[5] Ingots and castings are for 1938. Production of primary steel products is for 1937 in the absence of other data. Ingots and castings in 1937 were 1,452,000 tons.

[6] Figures on production of primary steel products not available. Imports are for 1939. Exports believed to be negligible.

[7] Production not available. Known to be small.

[8] No domestic steel industry.

The effective upper limit to steel shipments of this type will be Germany's capacity to roll the particular products involved. Out of a total primary steel production of about 20 million ingot tons in 1943, about 5 million tons went into structural steel and railway material. This would appear to indicate the approximate order of magnitude of German ability to produce steel in this form. Part of this production will be taken up by German domestic needs: about 1 million tons out of the 6 to 8 million tons estimated to be required domestically are accounted for by structural and railway materials.

b. *Metal fabricated products.*—It seems likely that there will be a margin between German steel

capacity and the demands which will develop for primary steel products. The possibility remains that the margin will be taken up by the demands which develop for such products as railway rolling stock; motor vehicles; industrial, agricultural, and mining machinery; electro-technical equipment; and others.

In considering the impact of these demands on steel production it is essential to note that in wartime Germany a large portion of primary steel products goes into the manufacture of peculiarly military goods, such as guns and ammunition, that cannot be put to peacetime uses. Out of Germany's 20 million ingot tons of output in 1943, about 5 million tons may have gone into the production of such goods. Unless, therefore, conversion to the production of peacetime goods is carried through with dispatch, there may be a margin of unutilized German steel capacity in the short run in the face of unsatisfied reparation demands. Possibly some of the steel shapes which would have gone into such output may be wanted by other countries for further fabrication within their borders, but it is probable that the bulk of this steel will have to wait on German reconversion of the steel-fabricating industries.

3. *Attitudes of third parties.*—The analysis of the earlier sections indicates that, with successful reconversion, the short-run combined reparation demands for primary steel products and fabricated steel products are likely to tax the productive capacity of the German steel industry. Over the longer run, demand is likely to continue large if only because of the almost limitless potentialities of Russian absorption of steel products. According to this analysis the German steel industry will be assured a market for many years after the war's end. This may be at a time when the steel industires of other countries involved in the reparation settlement will be searching for markets for their products.

It is possible, under the circumstances, that extended reparation shipments in steel and steel products will be opposed in some quarters. In the early post-hostilities period shipments of steel and steel products probably will not be opposed strongly; indeed, some of the countries which normally export steel may even welcome such shipments. But as home industries are restored and as international trade revives, countries with large domestic steel industries will not welcome a German monopoly of a large part of the export market for steel and steel products through reparation shipments.

Reference to table 14 above indicates that shipments of primary steel are likely to cause only a minor irritation. For it is clear that only Yugoslavia, Holland, Norway, and Greece are likely to have continuing demands for such steel beyond the early post-hostilities period, and their combined intake is small compared to the combined exports of the steel-exporting countries. It is true that shipments to these countries may bulk large under the circumstances that the large steel-producing countries are not able to utilize their capacity fully. But the major irritation is likely to come from another source; namely, shipments of fabricated metal products. German exports of these products on reparation account would encroach on the export markets of both Great Britain and the United States.

D. TEXTILES

1. *Introduction.*—Immediately after the close of hostilities, clothing and textiles will be among the most pressing needs of the liberated areas of Europe. Hence the German textile industry may well be called upon for a substantial contribution on reparation account in the first period of occupation. The most serious problem connected with textile contributions at this stage will be the supply of raw materials. At a somewhat later stage, as the textile industries of the liberated countries revive and as resources in Britain become available for the production of export goods, the transfer of German textiles as reparations may appear as a threat to the trading position of the recipients and of other exporting countries, rather than as a useful contribution to the rehabilitation of Europe. Some of the problems that are likely to arise on these two scores are discussed below.

It should be noted that the textile industry, as defined here, does not include the manufacture of clothing or other articles from textiles. It may be assumed, however, that the capacity of the German clothing industry is sufficient to process all the textiles that can be made available to it, so that the reparation claimants will be able to

receive either finished clothing or piece goods as they prefer.

2. *Capacity of the German textile industry.*—According to the 1936 Census of Manufactures, the German textile industry consisted of about 10,000 establishments, employing 11.5 percent of the industrial labor force. In terms of value added by manufacture, it was the third industry of the country (surpassed only by "building and miscellaneous industries" and "food, beverages, and tobacco.") It accounted for 9.8 percent of total exports. (A break-down by type of product is given in appendix A.)

During the war, the output of finished textiles has been sharply curtailed and many spinning and weaving mills have been closed down. It is probable that capacity has been permanently reduced because of deferred maintenance and the scrapping of machinery. In addition, the industry has suffered a certain amount of bomb damage.

The output of artificial fibers, on the other hand, has been increased greatly, to compensate for the loss of imported natural fibers. Production of staple fiber was officially reported at 250,000 metric tons in 1940 and has been estimated at from 350,000 to 400,000 tons in 1943.

3. *Raw materials.*—Before the Nazi regime, Germany was dependent on foreign sources for about 90 percent of its supply of textile fibers. By 1938 this had been reduced to 65 percent, and during the war years practical self-sufficiency has been attained, as a result of the decreased output of finished textiles and the continued expansion of rayon and staple-fiber production. (See appendix D for details.)

Although rayon or staple fiber may be substituted for natural fibers for most purposes, they still appear to be far more expensive than cotton and somewhat more expensive than wool, in spite of recent technological advances.[10] Hence it might be desirable, if shipping space were available, to allow the import of natural fibers into Germany after the close of hostilities, to be fabricated there into textiles on reparation account.

If it is decided to maintain the production of rayon and staple fiber in Germany after occupation, it may be necessary to import some wood or woodpulp, although Germany has been able to supply most of its requirements from domestic sources during the war by intensive exploitation of its forests. This policy has resulted in a depletion of forest resources, but it could probably be continued for some time if the longer-run consequences were ignored.

4. *German pre-war exports.*—Textile exports in the immediate pre-war years showed much the same pattern as German foreign trade in general—a shift away from Western European toward Southeastern European and Latin American markets. (Details are shown in appendix D.)

5. *Other European exporters.*—Data on the pre-war exports of the principal textile-exporting countries are presented in appendix D.

Great Britain, in spite of its steady losses since 1914, remained by far the leading European textile exporter in 1938. Clearly, the British industry will be most deeply concerned at the threat of competition from German reparation exports. Nonetheless, Germany was by no means so formidable a rival as Japan before the war, and a large part of British export losses was accounted for by the growth of domestic textile industries in countries such as India that had formerly been dependent on imports. The following statement by the Joint Committee of Cotton Trade Organizations should be noted:

> It appears that, altogether, about two-thirds of Lancashire's export losses since the last war, the greater part in India, can be attributed to the growth of local industries. Japanese competition accounts almost entirely for the remainder. In the past three years, new competitive forces have become prominent in the international cotton trade. In certain markets, especially in Central and South America, Egypt, and South Eastern Europe, trade has been lost to German and Italian competition, known to be subsidized and assisted by currency manipulations. In 1938, notwithstanding world depression and the severe decline both in British and Japanese exports, German and Italian exports were comparatively well maintained. French exports, also, increased in 1938, partly as a result of the depreciation of the franc, but this trade is almost wholly with French colonies.[11]

In spite of British concern over German competition, however, Britain was the largest importer of finished textiles from Germany before the war, while at the same time Germany was Britain's best customer for cotton yarns. There may be some interest in reviving this exchange,

[10] It has been asserted, however, that the high price of synthetics is in part artificial—the outcome of cartel action to support the position of certain high-cost producers.

[11] *Cotton Industry Facts and Figures*, Manchester, 1939.

and perhaps integrating it with the payment of reparations.

The growth of a synthetic-fiber industry in Great Britain adds a new complication to the picture of possible trade rivalry. Britain might hope, under relatively free conditions, to hold its own in competition with Germany in spinning and weaving, but in the production of synthetic fibers German industry was the pioneer and probably still has a technological advantage. Large exports of such fiber by Germany in payment of reparations would clearly be detrimental to British prospects in the field of synthetic textiles.

France, Belgium, Czechoslovakia and, to a lesser extent, Holland, are also likely to fear the competition of German reparation goods in their export markets, but their position will be different from that of Britain to the extent that they will themselves be in need of textiles immediately after the close of hostilities.

The textile industries of these countries have already suffered some damage as a result of military action. Even if they are thoroughly demolished before the German surrender, however, strenuous efforts will probably be made to resume production as soon as possible. It may be assumed that these countries will want textile machinery from Germany in addition to clothing and piece-goods, and that their desire for textile products will decline as their own industries resume operations.

6. *Non-European countries.*—German competition in the finished-textiles field will not be of particular concern to any country outside Europe. German production of synthetic fibers, however, threatens the position of American cotton growers and (more immediately) of wool growers in Australia, New Zealand, Argentina, and South Africa.

VI. POSSIBLE BASES OF REPARATION CLAIMS

A. INTRODUCTION

Whatever their justification in international law and usage may be, reparation claims rest on two broad foundations, one moral and the other military. The defeated enemy is considered to be, first, guilty of inflicting destruction and suffering on others, and therefore obliged to make recompense as far as possible. The victors have in addition the power to impose such an obligation (or, within the limits of their strength, any other obligation). In the present case, the evidence of Nazi guilt is so overwhelming and the amount of destruction so vast that the only limits to admissible reparation claims are set by German capacity to pay, on the one hand, and by Allied policy decisions on the other.

Hence a consideration of possible bases of claims would be pointless if the total amount of reparations were the only question at issue. Germany's capacity to pay will not be changed by the admission or exclusion of certain classes of claim, and Allied decisions regarding the desirability of imposing a heavy burden on Germany will not depend in any important way on an assessment of war damage. But it is necessary not only to determine the total amount of the reparation obligation, but also to allocate the proceeds among the Allied countries. It is for this latter purpose that a discussion of claims must be introduced.

B. GENERAL CRITERIA

Any formula for determining reparation claims should satisfy two general requirements: (1) simplicity and concreteness; and (2) justice as among claimants. These criteria are not wholly compatible, and the second is subject to conflicting definitions. One of the most difficult problems of the reparation settlement will be to arrive at a conception of just allocation that is acceptable at least to the major Allies and is at the same time simple enough to be workable.

Most discussions of the allocation of reparation payments revolve around three conceptions of justice: (1) the relative need of the various claimant countries; (2) the relative amount of damage and suffering undergone; and (3) relative contribution to the winning of the war. It will probably be necessary to take all three into account in the final settlement.

1. *Relative need.*—If reparation payments are considered primarily as a contribution to the speedy rehabilitation of Europe after the war, the resources otherwise available to each country should be taken into consideration before an allocation is made. These resources include not only human and material wealth within its terri-

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tory, but also foreign assets and ability to finance imports in other ways.

Need for assistance can hardly serve, however, as the sole criterion for allocating reparation payments. On this basis it might develop, for example, that certain colonial areas whose contribution to the war, or suffering from the war, was negligible would nonetheless be in a position to claim a substantial share of reparations. Although some redistribution of the world's wealth may be considered desirable, it is not likely to be politically acceptable in this form, nor is the reparation mechanism the most desirable means for accomplishing it.

Among the countries that would be in a position to make major claims agains Germany under either of the two succeeding heads, the following is a rough indication of the order of priority in terms of need:

1. Greece.
2. Yugoslavia.
3. Russia and the Baltic countries.
4. Poland.
5. Holland.
6. Norway.
7. France.
8. Czechoslovakia.
9. Belgium.
10. Denmark.
11. Great Britain.
12. United States.

(This listing attempts to take account of wartime destruction as well as of pre-war wealth.)

2. *Relative damage and suffering.*—An attempt has been made in column 1 of table 15 below to provide very rough and tentative estimates of the value of property damage resulting from the war. (The scope and derivation of the estimates are discussed below in sec. C.) Despite the limitations of the data, it is clear that Russia would be by far the largest claimant on this account.

Loss of life and personal suffering would also be a reasonable basis for reparation claims, but have been omitted from table 15 because of the difficulty of expressing such considerations in monetary terms. Pensions for war veterans and their widows and orphans have, however, been included. Russia would also be the largest claimant under this heading, but the relative share of the United States would be greatly increased.

Countries that have been occupied by the Germans will probably expect to be recompensed for the occupation costs charged against them and for unused clearing balances accumulated in Germany. Estimates for these items are given in column III of table 15.[12]

These categories (property damage, pensions, and occupation costs) by no means exhaust the possible (and probable) claims that may be expected to arise under the general heading of damage and suffering resulting from the war. They are fairly concrete items, however, and therefore possible to assess in a rough way. They are probably also the largest items and should serve to indicate the distributive effect of basing the allocation of reparation payments on damage and suffering, however defined.

3. *Relative contribution to the war.*—It may be objected that inclusion of occupation costs in reparation claims discriminates in favor of those countries that ceased fighting early in the war and allowed their territory to be occupied, as against those that continued to resist. Why, for example, is British expenditure for munitions a less legitimate claim against Germany than French expenditure for occupation expenses?

The inclusion of war costs, however (as may be seen from table 15, column IV), has the effect of increasing the claims of the wealthier nations—those, that is, that were in a position to make the largest material contribution to the winning of the war. To avoid an intolerable conflict between this criterion and that of relative need, it will probably be necessary to adjust war costs roughly in the light of national income or wealth.

The exact calculation of reparation claims on any basis will be impossible. The final determination of the national shares will depend on political agreement, which will probably take into account in a general way the considerations mentioned above.

C. BASIS OF ESTIMATES

The estimates presented in table 15 are in most cases arbitrary, although a careful examination of possible Russian claims has been made.

The estimates of property damage, in particular, must be interpreted with great caution, since only the most fragmentary data were available. For the United Kingdom and the United States, they represent loss of shipping tonnage only; not

[12] The estimates of table 15 are presented graphically in chart 1 immediately following table 15.

even an approximate assessment of bomb damage in Great Britain could be attempted. For the other countries, estimates of national wealth given in the Moody Manuals and other sources were taken, together with OSS materials on destruction, as the basis for damage valuations.

Property seized by the Germans without payment has not been included. The restitution of such property, when identifiable, will presumably be provided for independently of the reparation settlement. Sources for other parts of the estimates are given in the footnotes to table 15.

Table 15.—Estimates of possible reparation claims, under various assumptions

[In billions of reichsmarks]

Country	I. Damage to property		II. Pensions and similar payment		III. Occupation costs and clearings		IV. Budgetary war costs		Total I and II		Total I, II, and III		Total I, II, III, and IV	
	RM	Percent of total	RM	Percent of total	RM	Percent of total	RM	Percent of total	RM	Percent of total	RM	Percent of total	RM	Percent of total
1. Russia	56.0	69.2	30.3	61.8	.....	.....	176.8	22.2	86.3	66.3	86.3	42.9	263.1	26.3
2. United States	2.2	2.7	6.0	12.2	.....	.....	400.0	50.1	8.2	6.3	8.2	4.1	408.2	40.8
3. United Kingdom	10.2	12.6	3.0	6.1	.....	.....	181.0	22.7	13.2	10.1	13.2	6.5	194.2	19.4
4. Canada	.....	.....	.....	.....	.....	.....	25.0	3.1	.....	.....	.....	.....	25.0	2.5
5. France	3.0	3.7	3.7	7.5	33.0	46.1	15.0	1.9	6.7	5.2	39.7	19.7	54.7	5.5
6. Belgium	1.0	1.2	.7	1.4	9.0	12.6	.....	.....	1.7	1.3	10.7	5.3	10.7	1.1
7. Holland	1.0	1.2	.....	.....	11.6	16.2	.....	.....	1.0	.8	12.6	6.2	12.6	1.3
8. Poland	2.0	2.5	2.2	4.5	2.0	2.8	.....	.....	4.2	3.2	6.2	3.1	6.2	.6
9. Greece	1.0	1.2	.5	1.0	.5	.7	.....	.....	1.5	1.2	2.0	1.0	2.0	.2
10. Yugoslavia	1.0	1.2	2.2	4.5	1.5	2.1	.....	.....	3.2	2.5	4.7	2.3	4.7	.5
11. Denmark	.5	0.7	.....	.....	2.6	3.6	.....	.....	.5	.4	3.1	1.5	3.1	.3
12. Norway	2.5	3.1	.....	.....	4.4	6.1	.....	.....	2.5	1.9	6.9	3.4	6.9	.7
13. Czechoslovakia	.5	.7	.5	1.0	7.0	9.8	.....	.....	1.0	.8	8.0	4.0	8.0	.8
Total	80.9	100.0	49.1	100.0	71.6	100.0	797.8	100.0	130.0	100.0	201.6	100.0	999.4	100.0

FOOTNOTES

(Figures refer to column and line)

I. 1. OSS estimate.

I. 2-13. Estimates based on various statistics on the national wealth of the countries in question. (See text.)

II. 1. OSS estimate—includes pensions and separation allowances.

II. 2-13. Separation allowances estimated on number of men mobilized, *casualties not included*, at $300 per month in the armed forces, based on World War I estimate.

III. 5-13. *Germany. Foreign Contributions to the German War Effort* by Dr. Paul Hermberg, Federal Reserve Board, August 1944 (preliminary draft) covering period through September 1943.

IV. 1. OSS estimate.

IV. 2:

	Billion
1941	$12.5
1942	49.3
1943	83.7
1944	92.0
	237.5

at RM 2.5=RM 594 billion ⅔ of which imputed to war against Germany.

IV. 3. United Kingdom war budget, 1944 White Paper.

IV. 4. Canadian war budget—1940-43

IV. French war budget—1939-40.

VII. FORMS AND METHODS OF PAYMENT

A. INTRODUCTION

The payment of reparations, involving large international transfers of wealth, necessarily raises technical economic and financial questions. Institutional arrangements of various kinds will be required. (Some of the problems of organization are outlined in section VIII below, with suggested solutions.) But many of the apparently technical problems really hinge on underlying differences of interest or intention. It is the purpose of this section to sketch some of these possible attitudes and their influence on the choice of methods of payment.

B. PURPOSE OF REPARATIONS

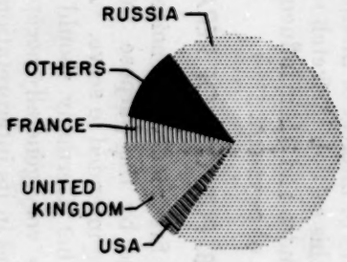
In the first place, the choice of methods will be influenced by the purpose that reparation payments are intended to serve. Although the proposition that Germany should somehow be made to pay is very generally accepted, there are wide differences in its interpretation and in the type of

CONFIDENTIAL

DISTRIBUTION OF REPARATIONS

UNDER VARIOUS ASSUMPTIONS

(Percent of Total)



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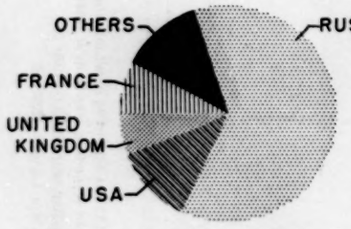

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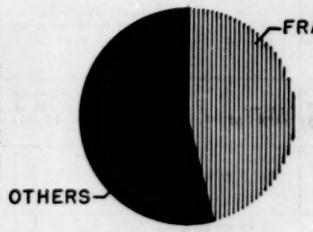
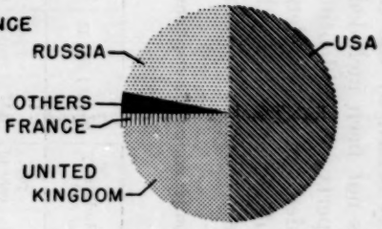
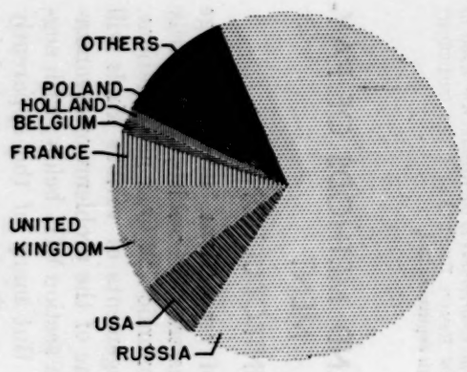


3. OCCUPATION COSTS

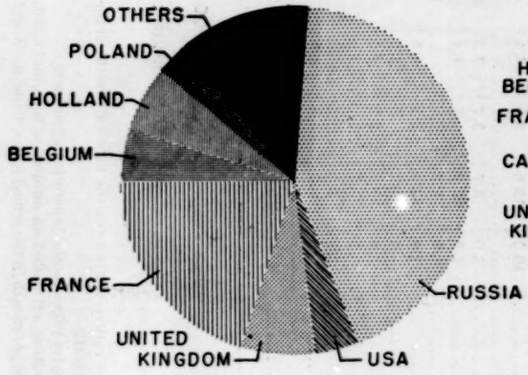


4. BUDGETARY WAR COSTS



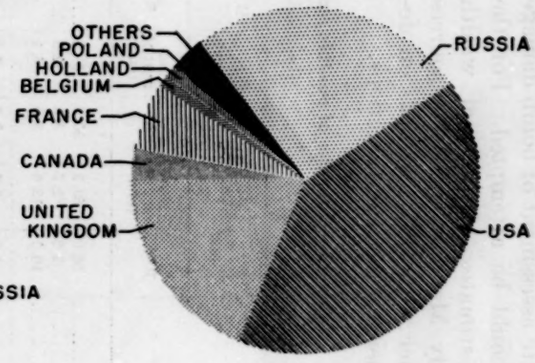
TOTAL

1. PLUS 2.



TOTAL

1. PLUS 2. PLUS 3.



TOTAL

1. PLUS 2. PLUS 3. PLUS 4.

justification brought forward. Three main purposes will be distinguished here:

1. Aid in the rehabilitation of devastated areas—i. e., "reparation" in the literal sense. This purpose implies a desire to receive from Germany certain specific goods and services (e. g., construction materials, textiles, or labor services) as quickly as possible.

2. Punishment and weakening of Germany. This purpose need not imply any desire or even willingness to receive German goods. Likewise, it need not imply any preference for immediate as opposed to longer-term payment. The types of goods demanded under this heading would differ to some extent from those under 1 above.

3. Equalization of wealth or income as between Germany and other countries. This purpose is seldom stated explicitly, but seems to underly certain attitudes toward reparations. It differs from 1 above in that it contemplates a continuing flow of goods from Germany over a period of many years—perhaps indefinitely. On the other hand, it differs from 2 above since the goods are wanted for their own sake and not merely for the effect on Germany of their transfer.

Actual motives are, of course, mixed, and all of these positions, or combinations and variants of them, may be held by the same person without inconsistency.

C. PROBABLE INTERESTS OF CLAIMANT COUNTRIES

In the same tentative spirit, an attempt has been made to classify the various claimant countries according to the attitudes their governments may be expected to take toward reparations. Five groups have been distinguished:

1. *Countries of Western Europe (France, Belgium, Holland, Denmark, and Norway).*—These countries have all been devastated or despoiled, to a greater or less extent. Their governments will probably demand German aid in rehabilitation immediately after the close of hostilities. On the other hand, they are relatively wealthy countries and will probably be able to resuscitate their economies rather quickly. After the first stage of acute scarcity has passed, it is possible that these countries will have difficulty in finding markets for their products and will be concerned to limit German competition rather than to exact goods for their own use. This situation could no doubt be avoided by appropriate action. If it should arise, however, the policy of these governments toward reparations must be, essentially, one of unwillingness to receive payment. This might result in outright cancellation, but would be more likely to lead to the sort of circular recrimination that marked the reparation problem after 1919. If the desire to punish or weaken Germany is strong in these countries, as it may well be, the difficulty of pursuing any consistent policy on reparations will be considerable.

2. *Great Britain and the United States.*—Even in the first stage after the close of hostilities, the British Government is likely to be more concerned about preserving markets than about receiving goods. This will certainly be true of the United States. Hence, from an economic point of view, these two countries will probably be from the beginning in a situation that will be reached only at a somewhat later date by the countries of the first group. (This is not inconsistent with a desire by Britian to acquire German assets abroad or to receive certain capital goods, especially ships.) The attitude of Britain and the United States, however, will be influenced in addition by the fact that they look upon themselves as great powers with special responsibilities and interests in the maintenance of peace. This might mean on the one hand, a generous attitude as far as their own reparation demands are concerned (since they would prefer not to take German goods) and, on the other hand, general support of harsh reparation terms (in order to weaken Germany and to foster inter-Allied solidarity).[13]

3. *Countries of Eastern Europe (Poland, Czechoslovakia, Yugoslavia, and Greece).*—After the first stage of rehabilitation, these countries may be expected to embark on programs of industrialization designed to raise their standard of living. If this is the case, they will probably wish to continue receiving German goods on reparation account for many years. Czechoslovakia and, to some extent, Poland (particularly with respect to coal) may be concerned about the invasion of

[13] This paragraph applies rather more clearly to the United States than to Great Britain. The British situation lies somewhere between that of the United States and of the countries of the first group. It is felt, however, that political considerations are of sufficient weight to warrant the classification of Britain in the second group.

their markets by German goods, and in all of these countries development programs might be hampered by unwise economic policies. Nonetheless, there is reason to believe that the Russian example of economic planning will be sufficiently persuasive in this part of the world to overcome such difficulties.

4. *Russia.*—All of the criteria mentioned under B above may converge in the case of Russia. The immediate demand for aid in reconstruction, the intention to weaken and punish Germany, and the long-range desire to improve the standard of living will exist together. There is no apparent limit to Russian willingness to make use of German goods and services.

D. METHODS OF PAYMENT

In the light of the considerations outlined above, it is now possible to examine some of the technical problems concerning forms and methods of reparation payment, and to indicate certain possible solutions.

1. *Fixed vs. indefinite obligation.*—One of the first questions that must be settled concerning reparations is whether Germany's obligation is to be definitely fixed (in terms either of money or of real goods), or whether the total amount is to be left to the future discretion of the victors.

This question has several variants. A fixed obligation might, for example, be so vast as to be in effect indefinite. Definite principles for assessing the obligation might be laid down, even though the exact amount were not stated. Arrangements for settling the amount definitely at some future date might be established. Obviously the effect rather than merely the form of reparation provisions must be considered in deciding whether or not the obligation is actually fixed.

A fixed obligation has the great advantage of allowing the German Government to make plans for payment and to look forward to a day of ultimate fulfillment. Given a minimum of intelligence, stability, and goodwill, the Germans would be encouraged to adopt a sensible financial policy and to operate their economy at a high level, since whatever they could produce over and above the fixed amount of reparations would be available for German use. In this way, the reparation claimants might actually receive more from a moderate system of fixed payments than from an indefinitely large claim that destroyed German incentive to produce.

If, on the other hand, the claimants are more interested in weakening Germany than in receiving goods, the very confusion resulting from indefiniteness would be considered an advantage.

Aside from this Carthaginian aspect, an indefinite settlement has the virtue of flexibility. In the first place, it avoids (or postpones) the problem of assessing the German liability. This is important, since a final assessment depends on the solution of many tangled political questions which it may be thought best to defer for consideration after wartime tensions have somewhat relaxed. Reparation contributions will be of greatest value to the recipients immediately after the close of hostilities, and any arrangement that speeds the transfer of commodities while postponing settlement of the underlying issues surrounding the assessment of liability has much to recommend it. An indefinite settlement has, in addition, the advantage of permitting adjustment with the passage of time, to meet changes in the complexion of the German government or in the willingness of the claimant countries to receive goods. The opportunity might be presented, for example, of reducing the reparation obligation of a friendly democratic German government and thereby strengthening its position.

Some of the advantages of flexibility might be combined with a degree of definiteness by expressing the German obligation as a fixed percentage of national income for a fixed period of years. This scheme would face various technical difficulties concerning the definition of national income and the danger of evasion by manipulating statistics. These should not, however, be insoluble.

A degree of definiteness might also be attained by fixing the duration of reparations although not their amount, which would be limited only by German ability to pay. This arrangement would have the advantage of encouraging the Germans to plan for their eventual readmission to world economic life on a basis of equality. On the other hand, it would provide no incentive for maximum production during the reparation period and would, indeed, imply effective Allied compulsion of German economic activity.

In general, it may be expected that those governments that emphasize the punitive aspects of

reparations will favor imposing an indefinite obligation on Germany. Proponents of definiteness assume that, under appropriate conditions, German cooperation can be secured, and that the eventual integration of Germany into world society is possible and desirable. If political considerations lead to the conclusion that the reparation settlement must be purely coercive, an indefinite obligation would be indicated.

2. *Existing capital vs. current production.*—The removal of German capital equipment to other countries, as a reparation contribution, may be advocated as the quickest means of securing elaborate items of equipment needed for the industrial rehabilitation of devastated areas. To the extent that speed is emphasized at the expense of either the total quantity of reparation payments or the quality and suitability of the goods received, transfer of existing capital will be favored by the claimant countries.

In addition to the element of timing, several other factors are likely to suggest the advisability of removing capital equipment from Germany. Such a policy, in the first place, might be an effective way of imposing industrial disarmament, if carried out systematically and vigorously Secondly, it might be adopted in a punitive spirit. Finally, removal of capital equipment might be encouraged as a means of reducing German ability to compete in world markets. All of these purposes require, however, that Germany should be prevented from immediately replacing the equipment removed. (A sufficiently drastic policy would be to some extent self-reinforcing, since the ability to replace equipment is reduced progressively as more equipment is removed.

There is a probability, however, that removal of capital equipment from Germany—unless it is very carefully planned—will have the effect of disrupting the German economy without conferring a corresponding benefit on the recipients. Germany could maintain a tolerable living standard with only a fraction of its existing capital, but it might be unable to withstand a haphazard levy even though the absolute amount of equipment involved were reasonable. Furthermore, from a strictly economic point of view, the productivity of most types of capital equipment is likely to be greater in Germany than in most other European countries. That is, claimant countries in most cases would profit more, in an economic sense, by allowing German labor to produce goods on reparation account in Germany with German equipment rather than by transferring the equipment to other countries. Even if the claimants want industrial equipment, they might be well advised to have it newly produced to their own specifications rather than to take existing German items.

Those governments that expect to receive reparations over a long period might be expected, in principle, to prefer maintaining German productive capacity more or less intact, in order to obtain the maximum flow of currently produced reparation goods. However, the strong preference for present over future goods on the part of those countries, together with their interest in weakening Germany, is likely to counterbalance such considerations. On the whole, it must be concluded that great pressures toward seizing German equipment will exist in all claimant countries, since this course promises a minimum of German competition to the wealthy countries of the west and a maximum prospect of quick industrialization to the less wealthy eastern countries. Opposition will come mainly from those who stress the importance of reintegrating Germany as quickly as possible into the world economy.

3. *Payment in real goods vs. payment in cash.*—The German reparation obligation may be expressed in terms of specified quantities of various goods and services (i. e., in kind) or in terms of money (foreign currencies or reichsmarks).

Payment in kind is, in a sense, a safer method. It assures a proper correspondence between German production and the requirements of the recipient countries. Under this system there is no problem of markets. It has, that is to say, the advantages of barter (and of course the disadvantages also). It gains safety at the price of inflexibility.

From the point of view of the western countries, payment in cash has the disadvantage of disguising the fact that reparations must ultimately be received in goods or not at all, and that these goods must necessarily compete against the products of the receiving countries. It has, on the other hand, the very great advantage of allowing reparation transactions to be integrated into the

structure of world trade. This means, among other things, that multilateral transfers are possible. Thus, for example, it would be possible for Germany to export manufactured goods to South America, receiving in exchange foodstuffs that were in turn sent to Great Britain in discharge of reparation obligations.

In an attempt to have the best of both worlds, the Dawes Plan provided for the separation of reparation payments into two parts: first, deposit by the German Government of German marks to the credit of the Reparations Commission; second, the transfer of these marks into foreign exchange for ultimate payment to the receiving countries. This conversion of marks into foreign currencies could take place only to the extent that a German export balance existed. Hence the receiving countries were forced to assume the responsibility of accepting German goods (or allowing third parties to accept German goods) if they wished to be paid in foreign exchange.

Payment in cash implies the existence of a relatively free market in Germany; otherwise the German Government, assuming a desire on its part to evade the reparation obligation, could manipulate prices and market conditions in such a way as to make a vailable to the reparation recipients only those commodities that they were least willing to receive. If the desire to punish and weaken Germany is uppermost in the minds of the recipient governments, payment in kind is clearly to be perferred to payment in cash. Cash payment allows the German Government to distribute the reparation burden in the manner least painful from the point of view of German interests. If reparations are intended to be punitive, the most painful form of distribution would be desired by the victor powers. Punitive reparations, however, need impose no transfer problem and their limit is set in practice chiefly by the vigor and ruthlessness of the receiving countries. From this point of view, German commodities could simply be destroyed or sunk in the sea. They need not be admitted into the markets of the receiving countries.

In short, the problem of reparation transfer comes to this: as long as the claimant countries wish to receive German goods, no difficulties will be encountered other than purely technical questions of bookkeeping. If, on the other hand, the claimant countries do not wish to receive German goods, even the most ingenious devices for payment can accomplish little. Simply as a means of weakening and punishing Germany, reparations are relatively inefficient—certainly less efficient than fire and explosives.

VIII. ADMINISTRATIVE ORGANIZATION AND PROCEDURES

A. INTRODUCTION

There has been substantial agreement in preliminary discussions of the reparation problem that a reparations commission should be established to be composed of representatives of nations with claims against Germany. It is here suggested that in addition an allocation administration, subordinate to the reparations commission, might be created to supervise the procurement and distribution of goods and services from Germany. The following four sections therefore discuss, first, a reparations commission proper, second, a suggested allocation administration, and, finally, their relationships with Military Government and with other agencies of the United Nations.

B. THE REPARATIONS COMMISSION

The nature, range, and magnitude of the problems which will face a United Nations reparations commission require that it be an international policy-making body at the highest level. The commission itself should probably consist of representatives of each of the United Nations. The commission, operating principally through a council consisting of representatives of Russia, the United Kingdom, and the United States, together with those of the remaining United Nations most concerned with reparations from Germany (chosen from among France, Belgium, Holland, Czechoslovakia, Norway, Yugoslavia, Greece, Poland, and possibly Denmark), would be charged with complete responsibility for determining the amount, character, and distribution of reparation payments.

According to general discussion the duties of such a commission would include the following: (1) examination and adjudication of all claims to reparations from Germany, and establishment of criteria for assessing their validity; (2) distribu-

tion of the total of reparation payments among the receiving countries and over time; (3) determination of the capacity of Germany to make reparation payments; (4) definition of the type and quantity of each category of payment; (5) solution of the problems of transfer and financing; and (6) integration of reparation payments with a system of world trade and aid in making the many economic adjustments required by the war.

The reparations commission, through its council would also be the final authority on the decisions of the suggested allocation administration, issuing policy directives to that body and reviewing such of its decisions as raise controversies between the administration and any nations concerned. Since these functions of a reparations commission can be better understood when the functions and structure of the suggested allocation administration have been made clear, discussion of them is reserved to section D below.

The reparations commission can be expected to meet periodically to consider and to ratify the proposals of its council; the council should be in constant session, studying and reporting on the main problems facing it and the member nations. To secure popular understanding and government acceptance of their recommendations, the studies and deliberations of both the council and the commission should so far as possible be public. A realization among all parties of the common interest of the United Nations in a settlement of the numerous, complex, and vital problems of reparations is essential, and the ability of the council to foresee and plan for the solution of such problems will greatly affect the chances of achieving war aims.

C. THE ALLOCATION ADMINISTRATION OF THE REPARATIONS COMMISSION

1. *Need for an allocation administration.*—The final settlement of reparations will require deliberation by a reparations commission such as described above. But such an organization is not, by its nature, capable of supervising the exploitation of Germany immediately after hostilities. This will require the creation of an administrative agency to secure from German stocks, current production, and capital equipment those goods and services most needed by the reparation-receiving countries and to distribute them equitably among the claimants. Hence the establishment of an allocation administration has been suggested, which, together with Military Government or a German government, would be charged with the maximum utilization of the German economy for the rehabilitation of Europe, within the framework of principles established by the reparations commission and other policy-making authorities.

2. *Staff of the allocation administration.*—The allocation administration would be staffed by experts from the various United Nations, the numbers being in rough accordance with the interest of each nation in the reparation problem. They should however, act as employees of an international organization rather than as representatives of their respective countries.

3. *Functions of the allocation administration.*—The work of an allocation administration would fall into two categories which may be distinguished as administrative and allocational.

a. *The administrative function.*—The administrative function is by far the most immediate and the most important to the rapid effectiveness of the plan. In this function, the administration would be engaged in setting up procedures for the taking of orders from claimant countries; this would in turn include the announcement of the form and method of placing orders, the scrutiny of individual orders, and liaison between the reparation-receiving nations and the authorities responsible for the production and delivery of reparation goods; that is, the Military Government of Germany or an indigenous German authority, and, in the final instance, the German plants producing reparation goods. The administration's task would be to reduce to a minimum the burden on those charged with securing production of the goods, and the principal problems would concern the terms and specifications of orders, the standardization of production models and types, the collection and processing of data on claimants' requirements, and similar duties specialized to the products involved. The job would require the services of industry specialists who would, in effect, be the purchasing agents of the reparation-receiving nations and who would have the primary contact with them. Such industry specialists would constitute the bulk of the staff of an allocation administration.

b. *The allocational function.*—The allocational functions of an allocation administration, while secondary to the administrative in assuring the quantitative success of the exploitation program, are those on which international concern and controversy are likely to center. It is therefore well to make clear the extent to which they would be exercised, even before discussing the manner and criteria of their use.

The allocational staff of such an allocation administration should function very much like the Program Bureau of the War Production Board, the Industry Divisions of which resemble the administrative staff. In both cases the industrial staff presents its supply-requirements problems to the higher body when needs seem likely to exceed supply. The allocational staff is not expected to be familiar in detail with individual commodity positions, but to concentrate on the over-all aspects of the problem—the interrelationship of all its sectors and the basic policies which have been established.

So long as the German economy can fill reparation orders without danger of serious domestic shortages, the allocation work of the administration will be slight. But when the orders of the reparation-receiving countries are, in addition to essential German needs, larger, in a given period, than can be filled (and if they are not larger, the German capacity to make reparations in kind is not being fully exploited) then the administration's allocational function must be exercised. In case of an excess of demand over supply (that is an excess of reparation orders, orders from non-reparation-receiving countries, and German domestic requirements over the supply from available German production and stocks of which capital equipment may in appropriate cases be considered a part), it will be the duty of an allocation administration to distribute the available supply to the most essential uses.

To do so it will require extensive data on German supply and requirements, which will need to be furnished by the Allied Control Commission or by the Military Government of Germany or such other Allied or indigenous authority as may be established to succeed Military Government or share jointly with it the task of governing the country. Detailed discussion of such functions in relation to an allocation administration is presented in section E below; it should be understood throughout that when reference is made to the discharge of duties by Military Government, the sharing of such responsibilities with relevant Allied authorities or their complete transfer is presumed. As for the nature of the task, it is only necessary here to indicate that Military Government should furnish the best possible intelligence on the German ability to supply a given commodity, and on the requirements for German domestic consumption and for exports to non-reparation-receiving countries, the latter relating primarily to the procurement for Germany of essential imports. Military Government will also need to provide information on German needs for imports from countries claiming reparations, in order that the allocation administration may provide for them.

Against this information, an allocation administration would weigh indications of requirements supplied by its own industry specialists and by the claimant countries. It should determine, subject to general directives from a reparations commission, such questions as the following:

1. How much of a given commodity can and should Germany supply? This will require consideration of materials to be imported by Germany, and German capacity in terms of labor and facilities, qualified by policy directives on minimal German needs and on removal of German capital equipment.

2. What distribution of the yield from Germany shall be made among claimant countries?

3. What payments in essential imports or domestic currency shall claimant nations make to Germany in order to maximize the yield of reparations? Shall these payments be made in ratio to total expected receipts in kind, or to the content in imported materials of specific categories of goods to be received?

Information from Military Government will play an important role in an allocation administration's decisions of such questions. Determination of the minimum domestic consumption and capital goods maintenance held by Military Government to be necessary for reasonable stability and the preservation of public order in Germany must be first considerations. Above these minimum levels the problem will become more complex, and should be decided by the allocation administration, if necessary under instructions from the reparations commission.

Military Government's views as to imports of raw materials and products needed to produce reparation commodities will also be significant, but the policy determination as to the quantities to be imported from neutrals and as to payment for them should rest with the suggested administration. This is also true of insuring imports of raw materials from reparation-receiving countries through contributions in kind or in domestic currency, and of determining how these contributions shall be assessed. Beyond this, there will be decisions as to the standard of living and future economic development of Germany which may be assigned specifically to an allocation administration and the reparations commission.

Although many of the actions of an allocation administration would individually be based on evaluations of the needs of claimant countries against those of Germany, they would also constitute policy decisions on the future state of the German and European economies. For example, certain machine tools can probably be removed from German factories without affecting Germany's ability to meet adequate domestic consumption and to continue reparations in kind. By "cannibalizing" and plant-combination, output can be maintained in the short term despite loss of some tools. But there are also long-term implications of such a policy; while proceeding with capital-equipment transfers from Germany, the allocation administration should study the long-term effects of its actions, and seek direction on this count from the reparations commission.

The basic criterion by which an allocation administration would distribute commodities in short supply among the reparation-receiving nations would probably be the need of each nation for each commodity.

In the application of this criterion, numerous issues will be raised. Questions of priority, for example, will arise as orders for German stocks, production, or capital equipment are passed by an allocation administration to Military Government to be filled in Germany. In the first instance these may be minor questions easy to settle. Stocks of a given commodity may be available but their distribution be possible only over a long period of time, in which case the administration's section dealing with that commodity would confer with the receiving countries and determine delivery-rate for each.

More controversial problems will arise when the goods required have to be produced by the Germans, perhaps involving a long production-period, or when Military Government believes that removal of capital equipment must be delayed until adjustments can be made to avoid disorganization of domestic German services or production. Definition of the limiting factors on the availability of supplies from Germany would be the responsibility of Military Government. Furnished with these data, an allocation administration would secure through its industry specialists information on the claimant nations' requests for the given commodity—the uses to which they will put the commodity, their domestic and other sources of supply, and similar data—and will then attempt to determine the quantity to be supplied by Germany and a distribution of the commodity most nearly satisfactory to all parties. If the allocation administration believes policy as to the German economy is involved, or if the claimant nations wish to contest the decision of the administration, review by the council of the reparations commission might be necessary.

The use of the criterion of need as a basic determining factor in an allocation administration's decisions rests, first, on the justice of the criterion itself, and, second, on the fact that deliveries in kind during the relief and reconstruction period will not necessarily prejudice the eventual settlement of total reparations. Decision as to the validity and quantity of reparation claims can be postponed, and the immediate aim will be the most economical and complete use of German resources.

D. THE ROLE OF MILITARY GOVERNMENT

The relation of Military Government to the proposed reparations commission, especially to the proposed allocation administration, the possible functions of Military Government in the procurement program, and certain regular functions of Military Government affecting reparations are discussed below. It is assumed in the discussion (1) that adequate liaison and central planning will permit Germany to be governed as an economic unit, and that occupation by zones will therefore not be a significantly disruptive economic factor;

and (2) that in every case in which functions are proposed for Military Government, these duties may be partially or wholly assumed by an Allied Control Commission or other Allied authority with responsibility for governing Germany, although Military Government alone is designated in the text merely for convenience of reference.

1. *The fact-finding function of Military Government.*—The need of an allocation administration for data from Military Government on availability of German stocks, production facilities and capital equipment, German domestic requirements, and imports required to maintain production have been briefly indicated in section C above. This information would be necessary if an allocation administration, under the direction of the reparations commission, were intelligently to determine deliveries and allocations.

The collection of this intelligence will be part of the general problem faced by Military Government of determining just what stocks and facilities exist in Germany, including the inventories held by government, by retailers, by manufacturers, and by materials-producers. Some of these stocks may be dispersed or hidden; Military Government will need to locate and safeguard these stocks and could report them to the allocation administration.

But these data alone would not suffice for the practical operations of an allocation administration. It would be necessary, for example, to assess the consequences of meeting the various demands on Germany, especially for installed capital goods, and the possible alternatives offered. Thus, if claimant countries demand both trucks and the machine tools used in their manufacture, Military Government would need to inform the allocation administration on the relative speed and efficiency of producing trucks in Germany and in plants elsewhere built with removed machinery. It would also be necessary to know what truck-making machinery is available from alternative sources (truck plants, plants making comparable products, especially former matériel plants, and machine tool-making plants).

2. *The procurement function of Military Government.*—Military Government, as the United Nations authority in Germany, will also need to requisition stocks in Germany, place orders with German industry, secure production and delivery of reparation commodities, and handle removal of capital equipment from German plants.

These responsibilities in turn will require the establishment of a central purchasing or purchase-coordinating body (or the use of a similar but modified German control-authority) to let contracts, arrange credit, conduct inspections, etc. The distribution of orders, which will be of great importance to individual German businessmen, to workers, and to individual towns and localities, can easily raise problems of discrimination burdening Military Government with much responsibility it does not seek. To maintain Military Government authority under such circumstances while still minimizing the amount of its work and responsibility will present difficulties.

The removal of capital equipment, if handled by Military Government, will also require a large investment in time and staff. Some equipment (e. g., that for finished armaments, likely to be the best and most modern) can be converted to post-war use, and since its removal will not affect Germany's ability to maintain its living standards, the problem need not concern Military Government but can be handled directly by the reparations commission. The removal of equipment in the service and repair industries, transportation and repair equipment, and consumer-goods machinery, on the other hand, will have much more immediate effects on the German economic situation, and will require the attention of Military Government (and the proposed allocation administration).

The physical task of removal and the maintenance of statistical records both for operating use and for use in the eventual settlement will also be a serious burden.

If there is to be an economic disarmament of Germany, it will also probably be carried out by Military Government, and any equipment removed (such as is not needed to produce war goods like synthetic rubber, special weapons, etc., for the United Nations) might be considered part of reparations in kind and its distribution supervised by an allocation administration.

This whole range of problems is not likely to be quite so complex immediately after hostilities cease, but eventually Military Government (and the proposed allocation administration) will have to meet such questions by having at hand a great

deal of detailed technical knowledge of the German economy, much like that required for economic control of a wartime economy. Military Government will therefore have to develop a staff capable of gathering the data and of analyzing alternatives, especially when stocks and production facilities for reparation commodities are less than requirements[14].

3. *Military Government's responsibility for production priorities.*—Military Government will find it necessary, in filling reparation orders, to assign priorities within Germany to many types of goods. Even in the initial stages, when the German economy is depressed, some materials and products, and perhaps skilled labor, will be in short supply; later, production facilities for some commodities may be short.

Of the three categories of priorities which Military Government will have to assign—labor, finished goods, and raw materials—the first should not be a serious problem. It is true that, after hostilities cease, foreign workers and prisoners of war, now an important part of the German labor force, will return home. If reparation payments are made by sending German labor battalions to restore devastated areas, large numbers of workers will be thus absorbed. Military Government's principal concern, however, will be with the supply of skilled labor which some types of highly fabricated reparation goods may require. To avoid limitation of the ability to secure goods from Germany by an inefficient distribution of the total German labor force working for the United Nations, care should be taken to assign to labor parties working abroad only such skilled labor as is absolutely required.

The assignment of priorities to finished goods and production materials is a more complicated problem. Priority and allocation measures designed to insure receipt of a share of scarce materials by every approved user must be distinguished from the much simpler matter of insuring preference for one group of consumers who do not require the entire supply of a scarce material. In the latter case a very much more elementary type of priority control is possible, since the controlling authorities need only make sure that the preferred consumer group receives what it requires, and, having no interest in protecting any other consumer, may allow the remaining output of the scarce material to be used for any purpose.

It is likely that the majority of priority problems facing Military Government (or an indigenous German government) will be of this simpler type. Military Government will probably have to assign priority ratings to only three classes of goods:

1. Goods needed for maintenance, repair, and the attainment of a minimum living standard in Germany;
2. Reparation goods; and
3. Goods required for export to neutrals in order to secure raw materials and products for the production of reparation goods.

The priority ratings applied to these products will be passed along by the manufacturer of the final product to his sub-suppliers, who will pass it, as necessary, to their suppliers in turn, ensuring for the components and raw materials the same preferential treatment as the final product.

Price-control measures will be required to prevent nonpriority users from outbidding reparations and other priority producers; failing effective price-control, Military Government will have to outbid domestic purchasers.

Complete allocation will be necessary only for goods of which:

1. All approved uses are essential and the total of these uses exceeds supply, and
2. The supply cannot be increased.

In such few cases, a more complete, though not necessarily very extensive control procedure will be necessary. It may be exercised by scrutiny of the orders, which will be accompanied by priority certificates stating the intended use of the allocated material. This can probably best be done, under the general supervision of Military Government, at the plants of the producers of the critical material, who are likely to be few in number and who should bear the bulk of the clerical work.

4. *Military Government's financial and trade-control responsibility.*—Most of the materials requiring complete allocation by Military Government are likely to be imported goods, since there will be less possibility of increasing their supply than of increasing the supply of domestically produced goods. Although they will raise special problems for Military Government, the fact that

[14] Some of the problems facing Military Government may be handled without material aid from German officials and personnel; others will certainly require substantial assistance from such persons. Discussion of the implication of this is reserved for section 5 below.

they are imported will tend to simplify their allocation control.

Military Government is expected to control the import and export trade of Germany. Among the several objectives of such control, that of limiting unessential German imports in order to minimize nonreparation exports is of principal concern here.

German nonreparation exports are necessary only to secure imports of raw materials needed to produce reparation goods or to maintain basic German consumption standards. As has been indicated above, reparation-receiving countries would be expected to provide the needed materials or domestic currency in accordance with a formula set by an allocation administration.

If the needed materials must come from neutrals or nonreparation-receiving countries, they will require goods from Germany in exchange; in this case Military Government would provide the allocation administration with a statement of requirements and the terms on which the desired goods could be secured.

Priority ratings comparable to those for reparation goods will probably be required for such exports in payment of needed imports. Since many of these exports will also be wanted as reparations, they should be kept to a minimum. On the other hand, Germany will not be able to expand her production without some imported materials, and there may be a tendency for the reparations commission to allow a slowly increasing amount of "free" German trade.

Payment to German producers and suppliers of goods for reparations in kind, simple in itself but a source of some problems, should be made in German currency furnished by the German central bank. The method by which the funds are made available is not important economically, but Military Government or the German Government should make strenuous efforts to remove from the German income stream by taxation, borrowing, and saving an amount equal to the value in German currency of the goods paid as reparations. After hostilities there will be large sums of savings which Germans may attempt to spend, and payments for producing reparations will add to this sum. Since few goods will be available to the Germans to absorb this income, it must be secured by the government or frozen—a step for which plans will have to be made by the Military Government fiscal authorities, unless they are willing to operate under conditions of inflation.

5. *The implications for Military Government of a program of reparations in kind.*—Although the program outlined here would require Military Government to exercise a number of economic controls and to supply supervisory personnel, the systemization of the task provided by an allocation administration would considerably relieve Military Government. Without such a system as that suggested in this paper, Military Government would have to deal individually with each claimant country and would be likely to find satisfaction of a host of separate claims, parcel by parcel, practically impossible. Only with an extremely large occupation army of United Nations administrative personnel could Military Government hope to succeed in operating such an uncentralized program.

The program of reparations in kind would be the joint responsibility of an allocation administration, Military Government, a German Government, and the German people. Military Government alone will be in a position to determine how much of the actual administrative effort it must itself make, and how far it feels justified in delegating its authority. It may wish to cede to the proposed allocation administration a large part of the task of analyzing the German economy's ability to supply various products, and to the indigenous German Government a large part of the task of procuring reparation goods and administering the economy in order to produce these goods.

Transfer of duties and authority from Military Government to an allocation administration would not be likely to arouse controversy; transfer to a German Government or to German institutions of economic control raises questions of basic policy.

In its simplest form, the problem is a choice between Military Government as a very large or a relatively small occupying force. The extent to which use of German economic controls will bolster Nazi and undemocratic influences is also involved. Even after all important Nazi officials have been removed from agencies of economic control, fear that only United Nations' adminis-

tration of these controls will assure their use solely in the United Nations' interests will limit the extent to which Military Government can delegate its administrative authority to Germans and German institutions.

Positive government over an economy as advanced as the German is clearly necessary if it is to be successfully operated and if substantial quantities of goods for relief and rehabilitation are to be secured. The remaining problem is therefore one of personnel and of the location of responsibility. However this may be determined, de-Nazification should be regarded as an independent function, to be carried out on its merits.

E. THE RELATIONSHIP OF THE REPARATIONS COMMISSION TO OTHER UNITED NATIONS AGENCIES

The proposed allocation administration of the reparations commission should have full knowledge of the contributions of UNRRA to each of the liberated nations, and may wish to coordinate its work with that of UNRRA on a broad scale. At some time after hostilities an allocation administration might decide to add any textiles and foodstuffs received from Germany as part of reparations to the UNRRA supplies, to be distributed with them. Certain capital goods closely related to health and welfare (water-purification machinery, emergency power equipment, delousing equipment, and the like) might also be given to UNRRA for use or eventual distribution to liberated nations.

The relationship of the proposed reparations commission to the Combined Anglo-American Boards might not need to be close except with respect to items in critical supply for the continuance of the war. All commodities and products procured from Germany and all those made available through the Combined Boards might, it is true, be considered as one pool, and distribution might be determined by a central authority of which an allocation administration could be one part. This would perhaps be inadvisable, however, since (1) the Combined Boards are agents of the British Commonwealth and the United States; (2) neither the United States nor the United Kingdom would be likely to welcome the participation of other nations in determining distribution of materials under American or British control; and (3) the allocation of goods for reconstruction abroad will become of considerable domestic concern in the several countries as strong demands for certain types of capital goods develop in domestic markets. For these reasons the Combined Boards may be most useful as sources of reconstruction supplies and equipment additional to material secured as reparations. Whether approach to the combined boards may best be made through the reparations commission, through a joint agency, or by individual nations is a problem not central to the present discussion.

There is also the question of the relationship between a reparations commission and such authority as may be created to direct and cushion the adjustments in European trade made necessary by the war, and to integrate the foreign trade of reviving nations with existing international trade. An agency of this type, like all agencies set up pursuant to United Nations monetary or developmental loan agreements, will find it necessary to take the reparation program into account in planning, since it will, in many cases, constitute the basis of such planning for some years.

Appendix A. GERMAN PRODUCTION STATISTICS

Appendix Table 1.—Germany: Production, by volume of specified commodities

[In thousands of metric tons]

Commodity	Year	Production
Coal	1938	186,179
Lignite	1938	194,980
Petroleum	1938	552
Pig iron	1938	18,044
Steel ingots	1938	22,661
Rolling mill products	1937	14,118
Copper, refined	1937	270
Zinc for smelting purposes	1937	163
Lead for smelting purposes	1937	162
Aluminum	1938	161
Coke (in coke works)	[1] 1937	40,921
Coal briquettes	[1] 1937	6,786
Potash (raw)	[1] 1937	14,460
Cement	[1] 1937	12,605
Thomas slag	[1] 1937	2,312
Calcium cyanamide	[1] 1937	603
Electric power	[1] 1937	[2] 48,969
Rayon	1938	65
Staple fiber	1938	155
Chemical wood pulp	[1] 1937	1,430
Mechanical wood pulp	[1] 1937	1,134
Paper	[1] 1937	2,836
Cardboard	[1] 1937	733
Machinery (sold)	1938	3,508
Leather shoes	1937	[3] 73,898
Automobiles:	1938	
Passenger cars		276,592
Trucks and busses		64,127
Tractors		24,636

[1] Partly 1936.
[2] 1 million kilowatt hours.
[3] 1,000 pairs each.

Sources: German Institute for Business Research, *Weekly Report*, 23 February and 29 June 1939; *Statistisches Jahrbuch für das Deutsche Reich*, 1936, p. 160; 1938; pp. 159 ff.; *Wirtschaft und Statistik*, 1939, No. 5, p. 173, and 1939, Sonderbeilage No. 3.

Appendix Table 2.—Germany: Production, imports, and exports, by volume, of specified commodities, 1932

[In thousands of metric tons]

Commodity	Production	Imports	Exports	Apparent consumption (production plus imports minus exports)
Coal	104,360	4,204	18,312	90,252
Lignite	122,661	1,458	8,728	115,391
Petroleum	230	270	[1]	500
Pig iron	3,932	172	370	3,734
Steel ingots	5,562	76	75	5,563
Rolling mill products	4,247	[2] 528	[2] 1,470	3,305
Copper	[3] 168	[4] 175	[4] 55	[7] 225
Zinc	[5] 45	[4] 102	[4] 13	[7] 100
Lead	[5] 100	[4] 51	[4] 23	[7] 120
Aluminum	19	2	3	18

See footnotes at end of table.

Appendix Table 2.—Germany: Production, imports, and exports, by volume, of specified commodities, 1932—Continued

[In thousands of metric tons]

Commodity	Production	Imports	Exports	Apparent consumption (production plus imports minus exports)
Coke	[6] 19,338	727	5,189	14,876
Coal briquettes	4,747	148	2,428	2,467
Potash	6,416	[1]	461	6,105
Cement	[7] 3,200	54	311	2,943
Thomas slag	533	[8]	[8]	533
Calcium cyanamide	344	[8]	[8]	344
Electric power [9]	23,459	[8]	[8]	23,459
Rayon	26	12	7	31
Staple fiber	1	[8]	[8]	1
Chemical wood pulp	967	112	294	785
Mechanical wood pulp	675	[8]	[8]	675
Paper and cardboard	2,405	20	403	2,022
Machinery	[10] 993	13	390	616
Leather shoes [11]	54,401	[12]	[12]	[7] 50,000
Automobiles [13]	53,257	[14]	[14]	[7] 50,000

[1] Negligible.
[2] Covers somewhat fewer categories than the production figure.
[3] Refined.
[4] Crude.
[5] For smelting purposes.
[6] In coke works.
[7] Approximately.
[8] Not available.
[9] Million kilowatt hours.
[10] 1933 sales.
[11] 1,000 pair.
[12] Only foreign trade values available. Exports far in excess of imports (RM 49 million and RM 10 million respectively, including leather goods).
[13] Number produced.
[14] Only foreign-trade values available. Exports far in excess of imports (RM 31 million and RM 8 million respectively, including motorcycles).

Source: *Statistisches Jahrbuch für das Deutsche Reich*, 1934, pp. 128 ff., 206 ff.

Appendix B.—GERMAN SALES AND EXPORT STATISTICS

Appendix Table 3.—Germany: Total sales, exports, and percent of total sales exported, by industries, 1936

Industry	Total sales, in thousands of reichsmarks	Exports	
		Thousands of reichsmarks	Percent of total sales
I. MINING			
Iron-ore mining	54,116	61	0.1
Copper-ore mining	12,070	0	0
Lead- and zinc-ore mining	13,118	2,276	17.4
Sulphur-ore mining	3,070	211	6.9
Other metal-ore mining	863	0	0
Mineral- and potassium-salt mining	187,901	64,103	34.1
Salt mining	24,926	1,521	6.1
Coal mining	1,659,189	264,665	16.0
Coke plants	752,533	93,221	12.4
Coal briquette plants	96,864	9,796	10.1
Lignite mining	391,378	26	0

See footnotes at end of table.

Appendix Table 3.—Germany: Total sales, exports, and percent of total sales exported, by industries, 1936—Continued

Industry	Total sales, in thousands of reichsmarks	Exports	
		Thousands of reichsmarks	Percent of total sales
I. MINING—continued			
Lignite briquette plants	402,658	17,788	4.4
Petroleum production	47,350	0	0
Graphite mining and washing	1,700	599	32.9
Fluorspar mining and washing	2,947	881	29.9
II. ENERGY-PRODUCING COMMODITIES			
Gas distillation from brown coal	50,376	0	0
Coal-tar distillation	103,111	9,519	9.2
Benzol refining installations	144,062	766	.5
Production of mineral oil derivatives and lignite wax	428,030	24,715	5.8
III. IRON-PRODUCING INDUSTRY	2,383,049	252,127	10.6
IV. NON-FERROUS METALS INDUSTRY			
Copper smelters	114,638	1,127	1.0
Lead and silver foundries	65,167	26	0
Copper refineries and electrolytic plants (independent enterprises)	143,975	3,663	2.5
Copper refineries and electrolytic plants (branches of copper-processing plants)	28,261	0	0
Gold and silver refineries	125,860	28,569	22.7
Zinc works	36,426	200	.5
Tin and detinning works	15,441	457	3.0
Alumina and aluminum works	148,542	2,238	1.5
Production of nickel, cobalt, etc	75,521	6,330	8.4
Production of ferroalloys, carborundum, etc	83,688	17,714	21.2
Rolling, pressing, and hammering works of the nonferrous-metals industry	756,565	75,202	9.9
Casting works of nonferrous-metals industry	49,540	689	1.4
Metal smelters	43,372	386	.9
V. FOUNDRIES			
Iron, tempering, and steel-casting works	879,762	35,820	4.1
Metal-casting works	221,814	5,173	2.3
VI. IRON AND STEEL GOODS INDUSTRIES			
Wire industry	501,039	84,115	16.8
Tool industry	174,966	32,201	18.4
Plate industry	422,193	50,661	12.0
Lock and horseshoe industry	117,584	25,535	21.7
Cutlery industry	103,369	32,640	31.6
Automotive-parts industry	376,341	34,851	9.3
Stove industry	177,394	7,947	4.5
Other branches of the iron and metal-goods industry	1,268,608	122,484	9.7
VII. MACHINE INDUSTRY			
Machine-tool industry	641,789	146,538	22.8
Textile-machine industry	177,485	83,466	47.0
Machine production for clothing industry	131,597	34,356	26.1
Farm-machine industry	266,614	20,671	7.8
Machines for paper-production, processing, and printing	138,199	56,281	40.7
Office-machine industry	142,794	26,770	18.7
Machines for milling and food-processing industries	165,412	38,887	23.5
Armature industry	173,778	16,949	9.8
Other machine industries	1,973,955	243,045	12.6
Boiler and apparatus production	212,124	9,858	4.6

See footnotes at end of table.

Appendix Table 3.—Germany: Total sales, exports, and percent of total sales exported, by industries, 1936—Continued

Industry	Total sales, in thousands of reichsmarks	Exports	
		Thousands of reichsmarks	Percent of total sales
VIII. IRON AND STEEL PRODUCTION			
Steel construction	397,637	7,557	1.9
Railroad-car construction	104,928	9,737	9.3
Narrow-gauge-car construction	33,621	5,425	16.1
Shipbuilding [1]	503,562	78,668	15.6
IX. VEHICLE INDUSTRY			
Automotive industry	1,419,861	104,392	7.4
Production of trailers	266,884	4,061	1.5
Production of bicycles and perambulators	129,606	6,475	5.0
X. ELECTRICAL INDUSTRY			
Electrical machinery	1,566,012	205,589	13.1
Cable industry	347,883	35,085	10.1
Electrodes industry	48,342	10,665	22.1
Battery and element industry	20,315	2,051	10.1
Accumulator industry	51,841	5,051	9.7
Light-bulb and fluorescent-tube industry [2]	76,170	10,470	13.7
XI. MECHANICAL AND OPTICAL INDUSTRY			
Optical and mechanical products	376,228	102,714	27.3
Orthopedic and hygienic products	24,474	1,203	4.9
Clocks	54,567	26,080	47.8
Watches	35,358	7,870	22.3
XII. METAL GOODS AND RELATED INDUSTRIES			
Metal goods	948,728	122,118	12.9
Bronze-paint manufacture	12,665	5,946	46.9
Metal-coatings manufacture [3]	30,241	(4)	(4)
Type foundry	12,114	3,215	26.5
Rubber stamps and stamping machines	8,812	967	11.0
Precious metals and jewelry industry	108,665	30,633	28.2
Fountain-pen industry	14,828	4,159	28.1
Diamond and precious stone processing	25,239	10,492	41.6
Small musical instruments	35,802	16,581	46.3
Musical-instrument strings	5,073	2,417	47.6
Phonograph manufacture	3,573	1,002	28.1
Phonograph record manufacture	5,855	1,368	23.4
Toy industry	74,015	28,947	39.1
XIII. STONES AND EARTHS			
Quarrying and processing of stones	290,764	6,042	2.1
Slate industry	12,195	1,029	8.4
Production and processing of crude asphalt	5,621	334	5.9
Mineral-processing plants	10,044	1,083	10.8
Gravel and sand pits	76,792	2,306	3.0
Production of other useful minerals	4,311	707	16.4
Production of peat and amber	15,180	2,094	13.8
Production and processing of chalk	5,111	174	3.4
Heavy spar pits	6,138	2,703	44.0
Clay, caolin, and feldspar pits	28,918	3,985	13.8
Lime industry	132,314	1,388	1.0
Cement industry	265,872	5,810	2.2
Gypsum industry	13,475	719	5.3
Mortar works	9,739	0	0
Plaster works	3,869	0	0
Brick industry	396,354	513	.1
Calcareous sandstone industry	36,784	11	0

See footnotes at end of table.

Appendix Table 3.—Germany: Total sales, exports, and percent of total sales exported, by industries, 1936—Continued

Industry	Total sales, in thousands of reichsmarks	Exports	
		Thousands of reichsmarks	Percent of total sales
XIII. STONES AND EARTHS—continued			
Pumice industry	30,023	505	1.7
Slag and slag products	28,024	944	3.4
Concrete-products industry	78,910	0	0
Asbestos cement and building plates industry	33,715	371	1.1
Xylolith industry	13,022	22	.2
Goods made from infusional silica and other goods for sound and temperature protection	19,484	1,413	7.3
Fireproof and acidproof goods	115,780	10,449	9.0
Stoneware industry	34,965	1,749	5.0
XIV. CERAMIC INDUSTRY			
Fine ceramic goods	277,191	49,178	17.7
Polishing, sharpening, and grinding material industry	58,108	6,565	11.3
XV. GLASS INDUSTRY			
Glass works	268,386	46,992	17.5
Tubular-glass industry	41,571	13,889	33.4
Plate-glass industry	34,792	1,694	4.9
XVI. SAWMILL INDUSTRY			
Sawmills (including production of sills and masts)	613,038	638	.1
Planing works	78,595	119	.2
Veneer works	43,514	1,562	3.6
Wood-preserving plants	37,566	1,121	3.0
XVII. WOODWORKING INDUSTRY			
Plywood industry	95,911	3,743	3.9
Furniture and building-parts industry	680,384	5,210	.8
Piano and organ manufacture	18,685	5,850	31.3
Wooden-goods industry	174,950	11,224	6.4
Wood-meal industry	2,550	88	3.5
Cooperage industry	30,202	2,517	8.3
Box manufacture	67,331	2,187	3.2
Wood-fibre industry	6,877	10	.1
Processors of cane for chairs	4,909	1,696	34.5
Wickerwork industry	21,034	566	2.7
Reed and straw plating and tubing	6,200	312	5.0
Cork industry	10,407	1,206	11.6
Processors of bristles, fibers, and hair	7,933	1,385	17.5
Brush industry	61,796	7,155	11.6
Plastic products, wood and other carvings	89,755	15,714	17.5
XVIII. CHEMICAL INDUSTRY			
Inorganic heavy chemicals	414,371	62,851	15.2
Fertilizer industry	553,021	61,282	11.1
Organic chemicals and tar dyes	485,216	185,746	38.3
Pharmaceuticals	412,588	124,567	30.0
Synthetic materials	216,951	27,240	12.6
Mineral dyes	102,295	22,869	22.4
Other chemical industries	421,667	55,846	13.2

See footnotes at end of table.

Appendix Table 3.—Germany: Total sales, exports, and percent of total sales exported, by industries, 1936—Continued

Industry	Total sales, in thousands of reichsmarks	Exports	
		Thousands of reichsmarks	Percent of total sales
XIX. CHEMO-TECHNICAL INDUSTRY			
Ignition devices and gas mantles	49,121	2,256	4.6
Natural resin products	14,114	2,575	18.2
Glues	45,946	1,530	3.3
Lacquer and varnish	226,626	9,378	4.1
Printing inks	44,403	7,235	16.3
Production of dye goods	34,303	5,678	16.6
Pencil industry	18,633	9,180	49.3
Production of linoleum, oil cloth, synthetic leather, and related products	106,052	14,049	13.2
Roofing-felt industry	97,803	906	.9
Wax-processing industry	9,753	1,948	20.0
Production of candles and wax products	111,293	1,705	1.5
Stearine industry	10,311	291	2.8
Soap, washing preparations, and glycerin industry	389,559	4,485	1.2
Cosmetic industry	119,850	7,656	6.4
Production of materials for textile and leather industries	63,782	15,171	23.8
XX. RUBBER AND ASBESTOS INDUSTRY			
Production of rubber goods (excluding tires and shoes)	221,224	23,229	10.5
Tire industry	192,928	9,370	4.9
Rubber-shoe industry	24,614	1,381	5.6
Rubber recovery, etc	9,480	26	.3
Production of guttapercha and balata goods	4,255	597	14.0
Asbestos industry	37,450	4,952	13.2
XXI. PAPER, BOARD, CELLULOSE AND LIGNIN INDUSTRY			
Wood-pulp manufacturers	87,861	88	.1
Cellulose industry	247,376	21,190	8.6
Paper and board manufacture	809,644	85,991	10.6
XXII. PRINTING AND PAPER PROCESSING			
Paper-processing industry	122,000	22,998	18.9
Printing industry	1,008,738	15,597	1.5
Chemigraphic industry	20,798	160	.8
Bookbinding industry	86,736	2,340	2.7
Paper-goods industry	252,412	11,900	4.7
Converted paperboard products	205,741	5,957	2.9
Wallpaper manufacture	26,590	4,187	15.7
XXIII. LEATHER INDUSTRY			
Leather manufacture and tannery	596,001	54,789	9.2
Leather dressing	12,991	712	5.5
Shoe industry	653,754	5,175	.8
Industrial belting	41,935	1,618	3.9
Leather goods	236,447	18,122	7.7
Leather gloves	34,276	5,320	15.5
XXIV. TEXTILE INDUSTRY			
Rayon and staple-fiber industry	303,061	27,123	8.9
Woolwashing	[3] 1,283	0	0
Woolwashing and combing	[3] 28,192	[3] 411	1.5

See footnotes at end of table.

Appendix Table 3.—Germany: Total sales, exports, and percent of total sales exported, by industries, 1936—Continued

Industry	Total sales, in thousands of reichsmarks	Exports	
		Thousands of reichsmarks	Percent of total sales
XXIV. TEXTILE INDUSTRY—Con.			
Combed-wool and ramie-yarn spinning and thread making	427,379	52,037	12.2
Willowing plants	44,772	514	1.1
Carded-yarn spinning and weaving	274,373	2,872	1.0
Cotton spinning and thread making	777,157	25,237	3.2
Flax and hemp steeping	15,569	0	0
Flax spinning and thread making	59,154	1,394	2.4
Hemp and hard-fiber spinning and thread making	83,467	3,359	4.0
Jute spinning and thread making	64,758	798	1.2
Silk weaving	334,434	44,050	13.2
Weaving of clothing material	822,895	54,295	6.6
Weaving (excluding woolen outer clothing material)	1,627,429	87,468	5.4
Production of woven and knit goods	820,771	77,466	9.4
Production of sewing, darning, and embroidery cotton	97,029	16,203	16.7
Production of ribbons, laces, and braid	154,998	17,713	11.4
Production of embroidery, lace, etc	71,844	9,281	13.0
Production of tents, tarpaulins, and bags	86,343	3,005	3.5
Felt production	29,118	4,635	15.9
Production of cotton waste	12,681	252	2.0
Production of cotton wool for surgical dressings	7,730	266	3.4
Production of surgical dressings	26,091	1,271	4.9
Horsehair spinning and sewing	12,563	275	2.2
Production of nets	7,368	1,313	17.8
Textile finishing and processing industry	438,112	21,857	5.0
XXV. CLOTHING INDUSTRY			
Clothing industry	1,529,850	57,843	3.8
Fur dressing	17,162	2,706	15.8
Fur-goods manufacture	40,205	867	2.2
XXVI. INDUSTRY OF OILS, FATS, FEEDING STUFFS AND ANIMAL GLUES			
Oil mills	[5] 359,329	6,672	1.9
Oil processing industry	[6] 285,424	1,714	.6
Tallow melters	28,217	9	0
Lard renderers	28,172	0	0
Margarine producers	[6] 346,637	479	.1
Knackers	[7] 7,364	6	.1
Bone utilization industry	17,714	707	4.0
Fish meal and oil manufacture	14,887	0	0
Production of skin and leather glue, gelatine, and synthetic casings	43,478	6,377	14.7
Feed industry	219,402	30	0

See footnotes at end of table.

Appendix Table 3.—Germany: Total sales, exports, and percent of total sales exported, by industries, 1936—Continued

Industry	Total sales, in thousands of reichsmarks	Exports	
		Thousands reichsmarks	Percent of total sales
XXVII. SPIRITS			
Agricultural distillation of potatoes	[1] 105,875	0	0
Molasses distillation [8]	4,711	0	0
Yeast fermentation [8]	52,012	0	0
Clearing and denaturation of spirits	209,186	0	0
Corn distillation [8]	16,489	0	0
Wine distillation [8]	8,222	0	0
Production of hard liquors of all types [8]	367,572	742	.2
XXVIII. FOOD AND TOBACCO INDUSTRY			
Grain mills [8]	1,549,889	4,734	.3
Shelling mills	73,385	4,001	5.5
Bread production and baking	257,041	23	.0
Meat-processing industries	565,427	2,669	.5
Fish-processing industry [8]	139,144	806	.6
Sugar industry	781,213	6,353	.8
Candy manufacture	641,636	1,988	.3
Fruit and vegetable canning	206,698	785	.4
Cabbage products [8]	6,602	0	0
Fruit juice and fruit wine industry	37,701	85	.2
Evaporated milk industry	84,792	457	.5
Soft cheese products	38,333	34	.1
Pastry producers	74,007	142	.2
Potato dehydration [8]	17,278	3	0
Starch and starch-refining industry [8]	100,392	16,176	16.1
Alimentary paste	167,444	2,281	1.4
Coffee substitutes	98,696	258	.3
Malt industry [8]	116,650	3,369	2.9
Brewing industry	1,044,780	10,142	1.0
Champagne industry	28,821	582	2.0
Vinegar industry	32,990	47	.1
Mustard industry	12,984	259	2.0
Spice industry	21,800	132	.6
Tobacco industry	1,154,389	5,156	.4
XXIX. PUBLIC UTILITIES			
Power plants (producers and distributors)	1,652,987	3,660	.2
Gas plants (producers)	497,034	443	.1
Gas plants (distributors)	104,632	1	0
XXX. BUILDING INDUSTRY AND MISCELLANEOUS INDUSTRIES	[9] 7,151,000	[9] 40,000	.6

[1] Gross value product.
[2] Excluding tax on illuminating devices.
[3] Labor product value.
[4] Not available.
[5] Excluding monopoly tax and tax on fats, including subsidies.
[6] Excluding tax on fats.
[7] Including subsidies and fees.
[8] Financial year.
[9] Approximate.

Source: Same as appendix table 8.

Appendix C.—GERMAN REGIONAL EXPORT STATISTICS

***Appendix Table 4.*—Germany: Exports of coal, by regions, 1928**

Region	Total sales	Exports	Share of exports in—	
			Coal sales of the region	Coal exports of all regions
	Millions of metric tons		Percent	
Ruhr district	101.3	29.5	29	88
Aachen	6.1	2.0	33	6
Niedersachsen	3.74	0.04	1	0
State of Saxony	3.0	.0.03	1	0
Niederschelsien	4.7	0.5	11	2
Oberschlesien	18.8	1.3	7	4
Total	137.64	33.37	----------	100

Source: Wagenführ, Rolf, *Die Bedeutung des Aussenmarktes für die deutsche Industriewirtschaft*, Institut für Konjunkturforschung, *Sonderheft* No. 41 (Berlin: Hanseatische Verlagsanstalt, Hamburg, 1936), p. 16.

***Appendix Table 5.*—Germany: Exports of the machine industry, by regions, 1928**

Region	Value of exports in percent of the gross value product of the machine industry of the region	Value of exports in percent of the total machine exports of the Reich
Schleswig-Holstein	44.5	2.6
State of Saxony	37.4	20.6
Hessen-Nassau	36.8	4.8
Braunschweig	36.6	1.8
Thuringia	35.5	2.2
Hamburg	32.8	1.7
Schlesien	31.5	2.7
Baden	31.5	5.2
Anhalt	30.9	1.9
Würtemberg	30.4	6.0
Hessen	29.5	1.5
Province of Saxony	29.1	7.0
Rheinprovinz	28.9	16.8
Bayern	26.9	7.9
Brandenburg	24.9	2.4
Berlin	23.3	7.0
Hannover	22.1	2.4
Westfalen	19.4	4.5
Other regions	19.6	1.0
Germany	29.7	100.0

Source: Same as appendix table 4.

***Appendix Table 6.*—Germany: Exports of the iron and steel goods industry, by regions, 1928**

Region	Value of exports in percent of the gross value product of the iron and steel goods industry of the region	Value of exports in percent of the total iron and steel goods exports of the Reich
State of Saxony	41.1	5.4
Rheinprovinz	35.4	38.4
Schleswig-Holstein	32.3	1.4
Hamburg	32.3	0.4
Hessen	30.4	0.5
Württemberg	26.1	4.8
Bayern	25.0	7.2
Westfalen	23.8	26.2
Province of Saxony	21.7	2.0
Hessen-Nassau	21.3	2.6
Brandenburg	20.5	0.9
Thuringia	20.2	2.8
Baden	17.1	1.3
Hannover	14.9	1.4
Berlin	13.5	2.9
Germany	24.5	100.0

Source: Same as appendix table 4.

***Appendix Table 7.*—Germany: Exports of the woven and knit-goods industry, by regions, 1928**

Region	Value of exports in percent of the gross value product of the woven and knit goods industry of the region	Value of exports in percent of the total woven and knit goods exports of the Reich
State of Saxony	28.4	83.6
Brandenburg	24.2	2.0
Thuringia and Province of Saxony	7.9	3.3
Schlesien	11.5	.9
Rhineland	10.1	1.3
Württemberg	9.3	6.8
Westfalen	.8	0
Reich	21.3	100.0

Source: Same as appendix table 4.

Appendix D.—EUROPEAN TEXTILE STATISTICS

Appendix Table 8.—Germany: Total sales and exports of textiles

	1936			1937		
	Total sales in thousands of reichmarks	Exports and sales to exporters		Total sales in thousands of reichmarks	Exports	
		In thousands of reichmarks	As percent of total		In thousands of reichmarks	As percent of total
Rayon and staple fiber industry	303,061	27,123	8.9	449,862	23,959	5.3
Wool washers	1,283					
Wool washing and combing	28,192	411	1.5			
Combed yarn and ramie spinning and twisting	427,379	52,037	12.2	460,730	52,246	11.3
Reisserei	44,772	514	1.1	66,419	51	.1
Worsted yarn spinning and twisting	274,373	2,872	1.0	367,444	4,331	1.2
Cotton spinning and twisting	777,157	25,237	3.2	815,045	20,048	2.5
Flax and hemp rasting	15,569			29,260		
Flax spinning and twisting	59,154	1,394	2.4	75,064	1,804	2.4
Hemp and hard fiber spinning and twisting	83,467	3,359	4.0	104,130	3,030	2.9
Jute spinning and twisting	64,768	798	1.2	78,276	400	.5
Silk weaving	334,434	44,050	13.2			
Weaving of clothes for apparel	822,895	54,295	6.6			
Weaving of other fabrics	1,627,429	87,468	5.4			
Manufacture of knit-goods	820,771	77,466	9.4			
Threads for sewing, knitting, embroidering, etc	92,029	16,203	16.7			
Manufacture of ribbons and laces	154,998	17,713	11.4			
Manufacture of embroideries and lace-goods	71,344	9,281	13.0			
Manufacture of tents, tilts, sacks	86,343	3,005	3.5			
Manufacture of felt	29,118	4,635	15.9			
Industriewatte manufacture	12,681	252	2.0			
Manufacture of absorbent cotton	7,730	266	3.4			
Horsehair spinning and quilting	12,563	275	2.2			
Manufacture of nets	7,368	1,313	17.8			
Textile improving and finishing	438,112	21,875	5.0			
Total	6,596,990	451,842	6.9	12,446,230	[1] 105,869	4.3

[1] Partial total, not comparable with figure for previous year.

Source: *Die Deutsche Industrie; Schriftenreihe des Reichsamtes fuer wehrwirtschaftliche Planung*, Berlin 1939, p. 109.

Appendix Table 9.—Germany: Net production value of textile industry in states or provinces, 1936 [1]

	In million reichsmarks	Percent
Saxony	739.2	26.03
Rhineland	473.4	16.67
Württemberg	275.5	9.70
Bavaria	260.1	9.16
Westphalia	229.4	8.08
Brandenburg-Posen/Westpreussen	143.0	5.04
Thuringia	139.3	4.69
Lower Silesia	129.7	4.57
Baden	123.4	4.34
All others	333.0	12.72
Total	2,840.0	100.00

[1] Includes only states and provinces with a production value over 100 million reichsmarks.

Source: *Die Deutsche Industrie, op. cit.* pp. 146/47.

Appendix Table 10.—Germany: Supply of domestic and foreign textile raw materials

[In thousands of tons]

NET IMPORTS

	1932	1933	1934	1935	1936	1937	1938
Cotton (including reclaimed)	340.4	401.3	337.4	348.7	310.0	346.8	351.1
Wool (including reclaimed)	92.7	102.2	92.8	86.1	66.1	67.1	86.7
Industrial fibers	197.1	194.2	205.8	229.8	181.2	244.5	244.6
Rayon	3.3	2.7	2.7	1.2	−2.4	−1.1	1.8
Staple-fiber	.3	.3	6.1	8.1	4.0	6.5	6.3
Silk	1.5	1.5	2.4	2.3	3.0	2.9	2.8
Total	634.7	702.2	647.2	676.2	561.9	666.7	693.3
In percent	90.7	90.8	85.6	80.6	71.9	68.7	65.5

DOMESTIC PRODUCTION

Wool	5.3	5.2	5.4	5.5	6.5	7.1	7.3
Industrial fibers	4.0	3.4	5.7	16.0	33.3	41.1	36.3
Rayon	28.2	28.7	39.1	44.8	46.1	57.4	65.8
Staple-fiber	2.7	5.2	9.2	10.6	46.3	106.2	160.5
Reclaimed fibers	25.0	29.0	50.0	76.7	87.4	92.0	95.3
Total	65.2	71.5	109.4	162.6	219.6	303.8	365.2
In percent	9.3	9.2	14.4	19.4	28.1	31.3	34.5
Grand total	699.9	773.7	756.6	838.8	781.5	970.5	1,058.5

Source: Miesbach, Artur, *Die Deutschen Spinnstoffe*, Berlin, 1942; p. 25.

Appendix Table 11.—Germany: Total textile exports, 1934 through 1938

[In millions of reichsmarks]

	1934	1935	1936	1937	1938
RAW MATERIALS					
Silk, rayon, cellwool	2.8	1.4	1.9	1.7	2.06
Wool	25.7	11.1	6.8	4.6	2.61
Cotton	42.9	35.4	8.8	1.5	.95
Flax, hemp, jute	1.7	1.1	.9	.6	.59
Rags, scrap, etc	5.8	6.8	4.1	.2	.08
Total	78.9	54.8	22.5	8.6	6.29
SEMIFINISHED GOODS					
Yarn from silk, rayon	28.4	27.7	35.4	31.8	21.92
Yarn from cellwool	1.1	.3	1.0	1.6	.81
Yarn from wool	26.6	26.1	45.7	44.3	24.11
Yarn from cotton	13.4	12.5	23.2	20.9	15.47
Yarn from flax, hemp, jute	4.0	3.3	3.9	3.7	3.27
Total	73.5	69.9	100.2	102.3	65.58
FINISHED GOODS					
Fabrics from silk, rayon, cellwool	47.4	50.7	65.5	71.4	53.44
Fabrics from wool	54.4	46.9	68.5	90.7	78.75
Fabrics from cotton	39.2	41.7	62.1	86.1	81.09
Fabrics from flax, hemp, jute	15.2	14.1	16.6	17.4	14.07
Total	156.2	153.4	212.7	265.6	227.35
Total textiles export	308.6	278.1	344.4	376.5	299.12
Total commodity export	4,166.9	4,269.7	4,768.2	5,911.0	5,256.9
In percent of total commodity export	7.4	6.5	7.3	6.4	5.7

Source: *Statistisches Jahrbuch für das Deutsche Reich*, 1938; pp. 260/1. *Wirtschaft und Statistik*, vol. 19, no. 2; January 2, 1939; pp. 60/61.

Appendix Table 12.—Germany: Textile exports according to country of destination

[In millions of reichsmarks]

	1934	1935	1936	1937
CONTRACTING MARKETS				
Great Britain	51.89	41.26	30.50	33.20
Netherlands	49.95	38.17	23.00	20.00
Switzerland	29.85	20.09	12.00	11.40
Czechoslovakia	24.10	15.66	6.30	3.80
Belgium	19.83	12.85	5.40	5.40
Austria	14.43	8.30	2.30	2.60
Italy	9.26	7.09	3.70	2.80
Argentine	6.96	2.90	------	2.30
France	6.60	5.94	3.10	2.30
Brazil	------	------	2.60	1.00
United States and Canada	15.05	13.26	------	------
Total	227.92	165.52	88.90	84.80

Appendix Table 12.—Germany: Textile exports according to country of destination

[In millions of reichsmarks]

	1934	1935	1936	1937
STABLE MARKETS				
Sweden	33.85	27.23	20.80	24.50
Denmark	18.23	17.35	17.20	21.50
Australia	2.94	2.95	2.10	2.30
Norway	10.67	8.07	7.00	8.50
Latvia	1.81	3.23	1.70	------
Finland	3.15	2.70	1.50	4.00
Total	70.65	61.53	50.30	60.80
EXPANDING MARKETS				
Turkey	5.61	9.81	17.80	25.70
Yugoslavia	1.87	1.18	6.20	24.60
Rumania	3.48	7.72	14.20	18.00
Greece	2.45	4.43	7.50	13.30
Hungary	4.00	6.69	6.50	8.20
Chile	------	------	5.20	6.40
Central America	.52	------	4.20	6.30
Iran	.64	1.03	1.80	5.10
Bulgaria	.84	2.13	4.70	4.80
Colombia, Venezuela, and Peru	.96	2.39	5.70	4.30
British India	2.52	2.62	3.00	4.10
British West and South Africa	.88	------	4.60	------
Nigeria	------	------	------	4.70
Egypt	------	------	2.00	2.80
Total	23.77	38.00	83.40	128.30
Grand total	322.34	265.05	222.60	273.90

Source: *Statistisches Jahrbuch für das Deutsche Reich*, 1935, 1936, 1937, 1938, passim.

Appendix Table 13.—Germany: Textile exports according to regions of origin, 1936

[In thousands of reichsmarks]

Saxony	155, 794
Rhineland	99, 464
Bavaria	35, 172
Thuringia	27, 603
Württemberg	25, 560
Westphalia	22, 960
Baden	16, 532
Hannover	14, 637
Brandenburg-Posen	12, 949
Lower Silesa	11, 729
All others	30, 695
Total	423, 095

Source: *Die Deutsche Industrie. Schriftenreihe des Reichsamts für Wehrwirtschaftliche Planung*, Berlin 1939, p. 156.

Appendix Table 14.—Exports of cotton piece goods from chief European exporting countries, 1934 through 1938

	1934	1935	1936	1937	1938
	In millions of square yards [1]				
United Kingdom	1,993.5	1,949.1	1,916.6	1,921.9	1,386.5
	In thousands of quintals				
Italy	241.9	234.4	241.3	448.2	404.3
France	352.6	346.7	357.2	345.3	422.1
Czechoslovakia	62.2	64.5	66.9	81.3	.....
Netherlands	90.4	103.4	126.5	227.0	204.0
Belgium	162.8	169.7	192.1	161.7	106.5
Germany	69.1	95.7	159.6	211.8	208.5
U. S. S. R.	208.2	191.7	173.9	200.0	.....

[1] One million square yards is, very approximately, equivalent to 1000 quintals.

Source: International Labor Office; *The World Textile Industry*, Geneva, 1937, Vol. II, p. 72. Joint Committee of Cotton Trade Organizations; *Cotton Industry Facts and Figures*, Manchester, 1939, p. 15.

Appendix Table 15.—World trade in wool fabrics, selected exporters and importers, 1934–35

[In millions of pounds]

Exports to—	Exports from—				
	United Kingdom [1]	France	Germany	Italy [1]	Czechoslovakia
United Kingdom	.....	0.4	0.5	0.6	0.1
Germany	1.2	.1	.....	.....	.1
United States	2.1	.3	.....	.....	.....
Argentine	3.6	.5	.....	.8	.....
Canada	7.2	.1	.....	.....	.....
France	1.3	.....	.....	.....	.....
Italy	1.0	.....	.3	.....	.1
Japan	1.0	.....	.....	.....	.....
Austria	.....	.....	.1	.....	.9
British India	2.4	.....	.1	8.4	.....

[1] 1934.

Source: *Ibid.*, p. 146.

Appendix Table 16.—United Kingdom: Exports of cotton yarns, 1934 through 1938

[In thousands of pounds sterling]

	1934	1935	1936	1937	1938
Total	10,236.0	11,161.7	11,849.4	13,694.4	9,674.9
To British countries	2,077.4	2,370.7	2,402.5	2,735.1	2,039.3
To foreign countries	8,158.6	8,791.0	9,446.9	10,959.3	7,635.6
Baltic States (Finland, Latvia, Lithuania)	212.3	256.1	307.4	353.8	269.5
Scandinavia (Sweden, Norway, Denmark)	1,001.5	1,027.2	1,198.6	1,247.3	892.2
Poland	129.2	168.2	222.5	242.6	244.9
Germany	1,747.1	2,542.3	2,692.8	2,819.9	2,754.1
Western Europe (Netherlands, France, Belgium, Switzerland)	1,739.0	1,905.8	2,102.8	2,873.8	1,074.2
Spain, Portugal	23.3	20.9	22.6	126.6	391.9
Italy	26.3	20.3	.5	6.7	6.2
Central Europe (Austria, Hungary, Czechoslovakia)	326.4	238.8	259.2	300.7	201.7
Balkans (Yugoslavia, Bulgaria, Rumania, Greece, Turkey)	1,079.8	670.5	817.8	626.6	495.9
China, Japan, Siam	196.7	152.3	144.8	126.9	75.6
United States	250.6	316.2	285.4	262.3	123.0
Mexico, Colombia	116.1	121.3	135.5	205.5	70.3
Chile, Brazil, Uruguay, Argentine	1,169.1	1,174.0	1,073.9	1,259.0	886.7

Source: *The Trade of the United Kingdom;* His Majesty's Stationary Office Lonon, 1939, passim.

Appendix Table 17.—United Kingdom: Exports of cotton piece goods, 1934 through 1938

[In thousands of pound sterling]

	1934	1935	1936	1937	1938
Total	39,820.0	39,532.0	40,318.8	44,768.7	31,961.2
To British countries	21,682.9	23,287.1	22,475.4	25,042.9	18,762.2
To foreign countries	18,137.1	16,244.9	17,843.4	19,725.8	13,199.0
Baltic States	372.0	451.5	546.7	632.7	504.7
Scandinavia	2,400.6	2,285.8	2,558.3	2,738.9	2,480.1
Poland	59.2	73.9	71.1	100.7	136.8
Germany	486.7	450.5	724.0	757.7	715.2
Western Europe	1,646.4	1,418.6	1,418.2	1,692.9	758.1
Spain, Portugal	164.4	142.0	113.2	96.4	95.6
Central Europe	163.7	137.8	125.0	116.2	92.5
Balkans	1,371.1	1,155.1	1,008.3	891.0	662.1
Egypt, Morocco, Iran, Iraq	1,378.4	1,095.2	1,693.3	1,319.2	846.9
Siam, China, Japan	563.9	397.8	267.1	251.6	185.1
United States	585.3	567.3	773.0	881.9	554.9
Central America, Mexico, Cuba	880.8	743.9	820.6	1,027.3	543.8
South America (without Argentine)	2,538.6	2,347.9	2,786.0	2,925.9	1,759.3
Argentine	3,581.2	3,012.1	2,698.3	3,215.1	2,411.4

Source: Same as appendix table 16.

Appendix Table 18.—United Kingdom: Exports of woolen and worsted yarns, 1934 through 1938

[In thousands of pounds sterling]

	1934	1935	1936	1937	1938
Total	6,821.8	6,494.5	6,509.4	6,712.1	5,329.4
To British countries	1,543.2	1,556.9	1,876.2	1,990.5	1,535.9
To foreign countries	5,278.6	4,937.6	4,633.2	4,721.6	3,793.5
Baltic States	393.3	320.3	397.7	446.1	462.4
Scandinavia	988.4	929.0	929.4	878.6	680.5
Poland	70.1	62.1	111.7	141.3	118.8
Germany	1,144.9	1,376.6	1,033.5	999.3	1,032.1
Western Europe	762.1	885.5	1,012.6	909.4	555.5
Italy	36.1	22.5	10.3	14.1	9.5
Central Europe	108.0	76.4	167.6	236.7	212.1
Balkans	774.6	572.0	393.9	458.7	462.7
China, Japan	562.5	190.8	11.7	111.7	16.5
United States	44.4	80.3	83.5	51.0	74.3
Colombia and Brazil	144.0	115.9	54.9	110.7	53.5
Argentine	62.6	79.0	87.3	91.9	53.2

Source: Same as appendix table 16.

Appendix Table 19.—United Kingdom: Exports of woolen and worsted fabrics, 1934 through 1938

[In thousands of pounds sterling]

	1934	1935	1936	1937	1938
Total	15,280.1	15,852.6	17,431.1	19,726.0	14,980.2
To British countries	5,132.9	5,091.6	5,689.8	6,637.7	5,093.6
To foreign countries	10,147.2	10,761.0	11,741.3	13,088.3	9,886.6
Baltic States	145.4	202.2	215.1	276.3	228.8
Scandinavia	1,400.3	1,519.9	1,693.1	1,762.2	1,479.9
Poland	33.6	44.0	53.8	55.0	51.4
Germany	549.4	566.0	931.0	895.2	790.4
Western Europe	1,948.5	1,626.7	2,154.4	2,092.2	1,494.5
Spain, Portugal	27.0	34.6	19.8	14.9	6.0
Italy	458.0	330.1	2.8	180.4	157.4
Central Europe	437.7	487.7	538.8	556.4	506.4
Balkans	442.4	402.2	411.4	412.6	375.9
Egypt, Iran, Iraq	583.6	581.2	659.7	613.0	435.6
China, Japan	791.9	723.1	714.4	666.1	139.4
United States	744.3	868.7	1,271.6	1,604.1	839.7
Cuba, Mexico	165.6	191.3	186.6	236.0	180.2
South America (without Argentine)	571.8	771.2	898.4	1,125.0	850.4
Argentine	1,279.2	1,670.6	1,722.8	2,141.2	1,946.7

Source: Same as appendix table 16.

Appendix Table 20.—France: Exports of textiles

[In millions of francs]

	1934	1935	1936	1937
TEXTILE RAW MATERIALS				
Great Britain	101.0	114.2	202.9	313.4
Germany	144.0	117.9	104.2	355.6
Belgium	184.6	189.3	280.7	440.5
Switzerland	81.6	64.6	87.6	124.1
Italy	37.5	28.1	10.9	63.3
Spain, Portugal	10.3	7.7	7.0	13.0
Netherlands	9.2	7.3	17.7	33.5
Poland	23.2	23.9	25.0	27.0
Czechoslovakia	130.1	98.2	133.6	197.7
Rumania	2.8	5.9	3.4	19.2
Total	886.5	848.6	1,038.5	1,962.4
YARNS AND FABRICS				
Great Britain	262.8	193.8	206.0	271.1
Germany	115.3	80.0	21.1	46.8
Belgium	228.2	165.1	113.6	169.1
Switzerland	204.7	107.7	102.2	138.9
Spain, Portugal	27.4	22.2	26.3	19.4
Italy	30.3	24.4		
Netherlands	114.9	102.0	[1] 89.2	[1] 115.4
Sweden, Norway	35.8	37.3	42.8	46.8
Poland	11.8	12.1	11.3	16.1
Czechoslovakia	12.8	10.2	19.0	26.6
Rumania	55.1	25.2	16.5	33.0
Egypt	21.4	17.4	20.5	25.4
Australia	14.9	10.9	9.5	15.6
United States	138.1	126.4	110.0	187.2
Brazil, Argentine	111.9	81.6	[1] 71.5	[1] 108.5
Total	2,672.2	2,177.9	2,003.9	2,932.9

[1] Includes apparel and lingerie.

Source: *Annuaire Statistique de la France*, 1938, passim.

Appendix Table 21.—Belgium: Exports of textiles, 1934 through 1938

[In millions of francs]

	1934	1935	1936	1937	1938
Textile exports	1,547.1	1,769.6	2,331.8	2,831.8	2,150.2
Total commodity export	13,794.8	16,125.9	19,745.2	25,516.2	21,670.4
Textile as percent of total	11.2	11.0	11.8	11.1	10.0

Source: *Annuaire Statistique de la Belge*, 1941.

Appendix Table 22.—Netherlands: Exports of textiles, 1935 through 1938

[In thousands of guilders]

	1935	1936	1937	1938
Textile exports total	44,760	49,959	89,009	77,810
Yarns	17,477	16,254	23,084	18,972
Fabrics	24,966	30,482	61,240	53,640
Total commodity exports	675,095	746,125	1,148,110	1,039,156
Textile as percent of total	6.6	6.7	7.7	7.5

Source: *Jaarcifers voor Neederland*, 1939.